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FOR THE PROTECTION OF WILD BIRDS AND MAMMALS

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BULLETIN

OF THE

MASSACHUSETTS AUDUBON SOCIETY

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Cover Illustration, HAVE ANOTHER, MR. BUSHYTAIL?, Irene M. Heffner.

The President's Page

During the three weeks this past summer that I lived on the edge of Hampstead Heath — one of the great parks on the circumference of the collection of boroughs governed by the London County Council — being in the park a great deal to observe the people there and the flowers, trees, and birds, I fell into conversation with various persons passing through it regularly morning and evening. Several told me that the park was not the shortest line between their home and the station either for bus or subway, but that it was worth taking the extra ten minutes to get "the feel of the country before being hedged up all day." One man, whom I judged to be about my age, stopped on a bridge over one of the little ponds on the Heath to ask me what variety of warbler I was watching through my glasses. I told him it was a Sedge Warbler. "Oh," he said, I should have thought it would have been a Willow Warbler." I asked him if he knew the birds in the park pretty well, and he said, "Not as well as I know the trees. You know it isn't only the beeches that grow to immense size here. If you care to take the time I will show you one or two of our greatest oaks. However, I fear that at this time of year they won't have many birds in them." Incidentally, we had a very pleasant walk together for several miles, during which he told me that he was largely retired from business; he had a regular course which he walked through Hampstead Heath every day and which took him about four hours. He said, "My wife and I have pains and aches in our bones if we stay in London during the winter, but spring and summer we enjoy here." And he greatly praised Lord Iveagh for giving to the nation the beautiful estate of "Kenwood."

The London parks are places of great beauty; the Rose Garden in the middle of Regent's Park is justly famous; but even the parks of the city squares are uniformly well kept. Having occasion to be at the British Museum, I spent an hour about lunch time in near-by Leicester Square, at one time surrounded by houses together in blocks as in our Louisburg Square, Worcester Square, and Northampton Square, and where formerly lived Sir Joshua Reynolds, William Hogarth, and Sir Isaac Newton, but now Leicester Square is surrounded by buildings used for mercantile purposes. The trees were healthy, the flowers gay, the grass untrodden, the walks in order, no initials cut on the benches, and no trash except in the trash barrels! There were no police officers in sight. There was a house in which the two men working on the garden kept their tools and ate their meals. I asked them if they had often to call in a police officer to keep order and they said, "Very seldom. Once or twice men have got to fighting here, usually when one or both were intoxicated, then they sometimes pull out knives and try to stick each other." In short, it seemed to me that the people of London were proud of their parks and enjoyed them.

I thought it to be impossible for any school committee to expect to receive or even to ask for "the transfer of nearly five million square feet of land in the Fenway for construction of buildings to house Girls Latin School and Boston Technical High." The Boston Park Commission and the mayor of the City of Boston are to be congratulated in their refusal to consider the proposition, and so are the mayor, the aldermen, and the Park Commission of Newton in refusing to accept the unfortunate decision of the Metropolitan District Commission to sell thirty-seven acres of State-owned land in the taking for the Hammond Pond Parkway to Congregation Mishkan Tefila, which is looking for a site for a new synagogue. Perhaps the late Charles Eliot, originator of the Metropolitan District Park System, had some reason to feel that the Trustees of Reservations might be safer custodians of places of especial beauty and/or of historic significance than public officials, in view of the intrusion into a beautiful section of Franklin Park of a hospital eight stories in height on Morton Street.

Robert Walcott

Many Happy Days

BY MARY LELA GRIMES

Associate Director, Wildwood Nature Camp



An Insect Hunt at Ipswich River Day Camp.

Naturalists, I am convinced, have life's greatest endowment wrapped up in their insatiable curiosity. The summer program of the Massachusetts Audubon Society is an exhilarating experience in sharing this endowment and creating for hundreds of boys and girls many unforgettable happy days.

It would be fortunate if every Audubon member could have had an opportunity to visit the expanded day camps, leaders' workshop, or Wildwood Nature Camp during the past summer and have seen firsthand what enriching experiences are inherent in these nature-oriented camping programs. As a substitute for the visits many of you could not make, I would like to portray from my own experiences some of the interesting events which are commonly part of the unique camping activities carried on at our Audubon sanctuaries.

There is no dearth of subject matter, for all the infinitude of the grand orders of nature are available to explore and learn about. Subjects are incorporated into the programs according to the special skills and interests of the staff or through the availability of special habitats. When I visited Ipswich River at Topsfield the Bunker Meadows were alive with a brigade of insect seekers. Armed with nets which they had sewed and assembled during earlier craft periods, twenty eager campers were running through the grass, nets flying, while a busy instructor was trying to answer the inescapable barrage of "What is it?" questions.

At Moose Hill, where almost fifty campers were registered for each of the three sessions, the sanctuary was the site of a seeming confusion on the day I visited while the youngsters were preparing for Parents' Day. Under a tree was an impressive display of birdhouses, illustrating one of the many ways in which handwork can be correlated with the subject matter of the program. In the Barn, creatively adapted as a camp workshop, an amazing aviary of orphan birds chirped happily as two camper-attendants prepared a variety of



**A Wildwood Camper
Makes His Own Net.**

Wildwood Camp, located at Cook's Canyon, and operating on a resident basis, had more opportunity to include a variety of subjects and advanced projects. Among the forty-six youngsters enrolled in each of the three sessions, many came to Wildwood as a step up from their experiences at other sanctuary day camps.

The approach to Wildwood programming was illustrated in an exciting bog trot. Before leaving for the quaking bog, the campers were introduced to the geological history and ecology of a bog. They learned about the peculiar characteristics of a bog habitat which supports insectivorous plants like sundew, bladderwort, and pitcher plants. Then the campers signed up in interest parties. One crew, prepared with nets and jars, were to collect pond life and water specimens for later microscopic examination. Another group was equipped to collect and study insects. One contingent would devote its attention to the plant life, while others were to observe and report on birds, animals, and reptiles.

Wading through the knee-deep sphagnum was adventure. There were cries of delight and excitement

foods and then expertly fed their feathered charges. One camper was patiently giving a young bat milk from an eye dropper. Another meticulously labeled trail signs.

Arcadia Sanctuary was bustling with day campers too. The day I visited there the current project was edible wild plants, and the campers had collected staghorn berries for sumac lemonade. The barn, set up as an attractive and efficient workshop, had exhibits of mantids, reptile pets, and a fascinating silkworm display. The highlight of the morning came when a larva spun its white silken cocoon before the intrigued gaze of a dozen pair of eyes.

At Pleasant Valley, Cook's Canyon, and at Tyngsboro, where John Gates conducted a day camp for Lowell youngsters, the story was similar and just as exciting. The



Looking for Snakes in a Stone Wall.

when the trees on the bog heath quaked. And when one sharp-eyed camper spotted a damselfly enmeshed in the sticky leaves of a sundew, the bog echoed with the cry, "Look at this boys, he's caught a big one!" One eleven-year-old camper was blind, but he named sphagnum by its texture, was intrigued by the convolutions of the pitcher plant, and spotted the Cedar Waxwings whispering in the larches before the rest of us were aware of them.

And there are the heartening follow-ups all through the year which show how these experiences with nature continue to influence the lives of young people. Many write and tell about their home nature museums, collections of insects, pet snakes, salamanders, and frogs. Others distinguish themselves in local science fairs. Young ornithologists join the Society campouts and send in reports for the bird records.

Most rewarding are the communications which show how Audubon leadership has opened a child's eyes to what he can find around him. A mineral enthusiast at Wildwood wrote after returning home: "Guess what, there are garnets just back of my house. I guess I never saw them before."

Resources applied to this kind of education and recreation for young people form, I am sure, an incalculably valuable contribution to the present and the future. We are laying foundations for sound scientific careers, creating intelligent respect for natural resources, and providing keys to hundreds of youngsters that will, for a lifetime, open the doors to many happy days in the out-of-doors.

"Chicken Hawk?"

BY KATHLEEN S. ANDERSON

Our Mallards spent the winter penned up until early April, when we released two pairs in our "duck pond." The duck pond is hardly worthy of being called a pond, for it is only a low spot between the garden and hayfield, surrounded by tall grass, scattered willows, and swamp maples, and holding just enough water to attract frogs and to please the ducks.

Early the next morning I glanced from the window and was surprised to see a large Red-shouldered Hawk perched in one of the small maples. To my everlasting shame, the many articles and books I have read about the beneficial habits of Buteos went unheeded for the moment. My first thought was, "Are my Mallards safe?" At that instant the hawk swooped down toward the marshy spot where the ducks often rest and, without stopping to think, I rushed to the door and down across the lawn. The Red-shoulder flapped off across the field toward the pines while I watched him go, wondering as I did so, "Now, why did I do that? For years I have tried to convince others that Buteos are not 'Chicken Hawks.' Don't I believe it myself?"

A few days later the big hawk was back again, and this time I watched quietly from the house. For over an hour he perched in small trees around the duck pond while the Mallards swam about unconcernedly almost beneath him. Occasionally he dropped down into the grass, after frogs or mice perhaps. He ignored the ducks as completely as they ignored him.

Since then he has returned day after day to perch quietly for an hour or two, usually in the early morning but occasionally at midday, and apparently finds good hunting here at the foot of our garden. I have had unexcelled opportunities to watch him closely through a binocular and I admit to feeling quite chagrined to think I ever suspected this handsome Buteo of evil intent toward our ducks.

A Hurricane Attends the Campout

Chatham, September 10 - 12

BY MARJORY BARTLETT SANGER

The Cape Campout this year was attended by an enthusiastic visitor named Edna who, not altogether mannerless, brought with her a present of such spectacular southern warblers that many of the experienced birders were left breathless, while those who could find words pronounced it their "fanciest half hour in the field." As we stood spellbound, Prothonotary, Hooded, and Yellow-throated Warblers played literally around our feet. A Blue Grosbeak was discovered in an evergreen, and an Orchard Oriole flashed overhead.

But this was on Sunday. Saturday, the first day of the campout, was passed for the most part in the Chatham High School, while the storm lashed trees already nearly leafless from the previous hurricane of less than two weeks before. We watched the school flagpole swaying, and saw the "eye" (but not the "tide," as was rumored) pass over the Town Hall. Richard Borden's brilliant movies of shore and water birds were shown in the morning before the electricity went off. We ate our lunch in the students' cafeteria along with the families which had been evacuated from the low areas. In the late afternoon, when the police and civilian defense finally permitted us to go out, we drove to the Chatham Light, where the tattered warnings were still flying, and watched the towering surf break over North Beach while swallows and Roseate Terns patrolled the shore. At the same time, 100 Wilson's Petrels were spotted in the Town Cove at Orleans.

We dined that night by candlelight at the Wayside Inn, our headquarters, under a luminous sunset, a full moon, and a rainbow.

And it was on the next day that we did our two days' birding in one. The boat trip having been canceled, we went early in the morning to Sears Point, where the "fancy" warblers had been spotted around the Griscom place. The thickets were alive with birds. A Lincoln's Sparrow was singing as we arrived, a Yellow-breasted Chat sprang up, and the southern warblers, like jewels, moved about the eaves and in the lilac bushes that glistened, still wet, in the rising sun. The count of Yellow-throateds rose to 4, Hoodeds to 10, and 3 Prothonotaries were found, as well as a dead Blue-winged, 2 Cape Mays, 5 Pines, and 4 species of Vireos.

The walk down Nauset Beach later that morning turned up 2 Seaside Sparrows; the skeleton of a Clapper Rail; a Northern Phalarope in a puddle; 6 Marbled Godwits; Pectoral, Western, Stilt, and Red-backed Sandpipers; and Forster's and Black Terns. Black-bellied Plovers were abundant, but Piping Plovers continued scarce because of the increased traffic on the beach. A Blue-winged Teal rose from a tidal pond, and among the dunes at the Outermost House an Alaskan Yellow Warbler was fitting. The high spot for many of us was watching the impressive flock of 200 Black Skimmers while we ate our picnic lunch on the warm sand.

In the late afternoon a caravan of twenty cars wound through the moors to see the Arkansas Kingbird in North Eastham. The Eastham Migrant Shrike was observed several times, and the day's trip came to a close worthy of it with the discovery of a Royal Tern at Chatham. In all, 135 species were recorded, a figure higher than average for the campout, and especially notable considering that there was no sea trip.

How to Enjoy the Outdoors

By RICHARD HEADSTROM

October

Watch Chipping Sparrows as they gather in flocks, preparatory to their taking off for the South.

Look for yellow crab spiders in goldenrod blossoms. These spiders exhibit color changes as they migrate to differently colored flowers.

Watch for shaggy-mane mushrooms on your lawn or along roadsides and in waste places. These mushrooms appear as if by magic overnight.

Observe the behavior of bumblebee queens. At this time of the year these large black and yellow bees begin to search for a retreat in which to spend the winter.

Keep on the alert for a newly arrived Northern Shrike. The bird may be seen perched on top of a small tree or post.

Look beneath fallen logs for ground beetles. As the cold begins to set in, the beetles congregate in such places for the winter.

Note how the scarlet oak seems on fire in the bright sunshine.

Listen for the song of the Catbird on days that are sunny and warm.

Take a ride through the countryside and look for the towering heads of the Jerusalem artichoke. They are often conspicuous along fence rows and roadsides.

After the first frosts, note how the ferns turn brown.

Visit a pond or stream. Wood turtles are now journeying to the water to dig down in the mud or to crawl into holes along the banks. You may see them.

Watch the sky for flights of migratory hawks.

Observe how the Virginia creeper is turning a rich cardinal. The vine may easily be recognized by its five leaflets.

In fields and waste places where autumn flowers are still in blossom, be on the lookout for a red admiral butterfly. This beautiful butterfly may still be seen at this late date.

In the woods, look for spotted salamanders as they search beneath the leaf cover for holes in which to escape the cold and storms of winter.

On bright days note that gnats and flies often come out of their winter quarters for a last dance in the golden sunshine.

Watch a squirrel bury nuts for future use. If you have never observed a squirrel do this, it is well worth a few minutes of your time. After he has dropped a nut into the hole, note how he presses the soil firmly in place and covers the spot with grass and leaves so as not to leave any trace of his excavating.

Look for Ruby-crowned Kinglets in roadside thickets.

On warm still evenings listen for the song of the snowy tree cricket, if the insect has not already been hushed by early frosts. The number of chirps a minute bears a definite relationship to temperature, and this has been reduced to a mathematical formula. If you want to find out how good a thermometer the insect really is, count the number of chirps in a minute, subtract 92 from the number, divide this by 4.7, and add 50.

Cattle Egret in Essex County

BY DOROTHY E. SNYDER

Photograph by Samuel A. Grimes



On April 25, 1954, a new species was added to the Essex County bird list when a small white heron appeared in a field with cattle at the farm of William T. Colby on High Road, Newbury. Being interested in birds and in the Parker River Wildlife Refuge, the Colbys telephoned Warden Stanwood at the refuge and Mrs. Clara deWindt, an enthusiastic field observer in the area and an active member of the Massachusetts Audubon Society. Mrs. deWindt identified the heron as a Cattle Egret and immediately notified other birders of this find, among them the advanced bird class of the Peabody Museum which was then on Plum Island. This class of twenty immediately left the harbor where they were studying a White-fronted Goose, and went with Mrs. deWindt to see the egret.

The writer, who was conducting the field trip, photographed the bird in color to establish the record for Essex County. Fully a hundred other bird watchers, summoned by telephone, saw the bird that day; and a number of others studied and photographed it on the three succeeding days before the Cattle Egret disappeared.

This is the first record of the Cattle Egret, or Buff-backed Heron, *Ardeola ibis ibis*, for Essex County, and the fourth for Massachusetts. On April 23, 1952 (note almost identical date), the first North American specimen was collected in Wayland by Allen Morgan, William B. Drury, Jr., and Richard Stackpole. In May, 1952, James Baird and Robert Smart, who, with the above-mentioned, have done much birding in this county, found one of the birds at Cape May, New Jersey. On November 27 and 29 of that year one was reported in Cambridge by Robert D. Nuner, and on November 28 one was shot by a hunter at North Truro, Cape Cod, and the specimen preserved.

Cattle Egrets have probably been present in the Clewiston and Okeechobee districts of central Florida for several years. It was not until June 1, 1952, however, that Louis A. Stimson, of Miami, identified a flock of ten in Okeechobee, though on March 12 of that year Richard Borden had unknowingly photographed them there feeding among cattle with Snowy Egrets. Here, on May 5, 1953, Samuel A. Grimes and Audubon warden Glenn Chandler discovered the first nest of the Cattle Egret for North America. A letter to the Massachusetts Audubon Society from Mr. Grimes in June, 1954, indicates that he and Herbert L. Stoddard found "hundreds of pairs" nesting in the Okeechobee region this year.

Another record of interest occurred in the fall of 1953, when a heron came aboard a fishing boat off the Grand Banks of Newfoundland in an ex-

hausted condition. It was preserved as a skin and shown to Roger Tory Peterson on his visit to St. John's, Newfoundland, in April, 1954, being identified as the first specimen of the Cattle Egret for Canada.

As this species breeds throughout Africa, southern Asia, and in Europe (Spain and Portugal only), there is a fascinating mystery in its appearance in the New World. Fr. Haverschmidt, the well-known ornithologist in Dutch Guiana, gives an account of its spread throughout South America, beginning in 1930, when a flock appeared in British Guiana. The birds were identified there in 1937 by Ludlow Griscom, of Harvard, and by 1944 had spread to Venezuela and the Netherlands West Indies. In 1946 Fr. Haverschmidt reported the first Cattle Egret from Dutch Guiana, where they soon became numerous; by 1953 he found more than eleven hundred in one roost. The species has increased rapidly in Africa in recent years and has become migratory there, and Fr. Haverschmidt considers the most likely explanation of their appearance in South America is that a migratory flock in Africa was caught by a strong air flow and blown to the coast of tropical South America. Whether all the present birds descended from this flock, or whether the occurrence was repeated, can only be conjectured.

Since the Parker River Wildlife Refuge, with its neighboring fields where cattle feed, might be a possible breeding place for this heron, it may become established here, though Essex County could never support the numbers possible in wilderness areas like those found in South America, where the bird is now found in numbers in Venezuela and Colombia, as well as in the Guianas.

The Cattle Egret is a small white heron, the size of a Snowy Egret or Little Blue Heron, but it is a stockier bird, with a shorter, heavier bill than the daggerlike bills the others possess. The Newbury bird was in good breeding plumage, being pure white with tufts of long pinkish-buff or rust-colored feathers on the crown, back, and breast. It had the bright orange-yellow bill, yellow legs and dark-brown feet found in adults in spring. Immature birds are white with yellow bills and dark legs and feet, while the bills and legs of adults vary from reddish orange in high breeding plumage to duller, darker tones in winter, when they also lose the attractive buffy plumes of spring. In flight their wingbeat is somewhat faster than that of a Snowy Egret, with the downstroke ending on a horizontal plane.

These herons frequent either dry grasslands or marshes where there are cattle or big game. They habitually associate with cattle in fields, walking around among them in search of grasshoppers and other insects disturbed by the animals. One of their feeding habits was observed in the Newbury bird when it stretched its neck to the fullest extent to snatch an insect from high on the flanks of a cow. When this becomes annoying to cattle, they may nudge or butt the heron away. In Africa the Cattle Egret sometimes associates with herds of elephants, and photographs show them removing ticks from the backs of these huge pachyderms.

Fall and Winter Work at Ipswich River

Volunteer workers are greatly needed at Ipswich River Sanctuary to help clean up the large number of trees and plantings uprooted or damaged by the recent hurricanes. Workers will be welcome any Saturday during the year.

Coffee and doughnuts will be provided, and those engaged in the cleaning up of the Sanctuary may also take home a generous supply of fireplace wood.

From the Editors' Sanctum

"Stop, Look and Listen!"

We in New England have a wonderful heritage of natural beauty which should be an inspiration to us at all times. It was my happy privilege this past summer to travel rather widely through the three northern New England States. From our cabin in the lake region of central New Hampshire we made frequent one-day or overnight trips at random and as the spirit moved, traveling in leisurely fashion over the network of blacktop roads but avoiding whenever possible those highways which were marked in red on our road maps. As we paddled across Asquam to get our morning mail, we would "size up" the weather probabilities and decide whether to spend a quiet day in camp or to board our "flying carpet" and drift about as the day's whim developed. Some days our course lay to the eastward to the old Pine Tree State, to lakes with intriguing names like Aziscoos, Mooselucmaguntic, Cobbosseecontee, and Cupsuptic or to the deeply indented coast from Casco Bay to island-dotted Penobscot and on to historic Frenchman's Bay and Mount Desert. Or a clear-cut "mountain day" would call us northward, through one of the White Mountain notches and on to the little lakes where the Connecticut River finds its source close to the International Border. Or the Green Mountains would beckon us with their verdant valleys and long wooded north-south ridges dominated by Camel's Hump, Mount Mansfield, Killington, or Pico, onward to sparkling Champlain with the Adirondacks' hazy blue in the distance or delicately tinted by the setting sun.

Wherever we drove, on winding country roads, uphill and down, we watched, not only the distant scenes and the ever-changing cloud effects, but we also scanned the near-by fields and woods and roadsides for the multitude of interesting things our New England countryside produces so lavishly. We saw towering cliffs where the rare Peregrines nested; sandbanks with rows of openings scraped out by Bank Swallows; a clumsy-looking Bittern flying heavily over a cattail swamp; Red-tails and Red-shoulders soaring lazily overhead; a Wood Duck family in a marsh-bordered pond; a great black and white Pileated Woodpecker with rakish scarlet crest cutting mortise holes in a tall rampike. We toured the "country of the pointed firs" with its slender spires of balsam and spruce; we passed great stands of ancient pines and "sugar orchards" of century-old maples; we rejoiced at tall canoe birches which had miraculously escaped the mutilation of the vandal's knife; we had a foretaste of autumn's glory in the early coloring of the swamp maples. We saw fields of red clover and masses of black-eyed Susans; roadside slopes covered with wild bergamot and haunted by Hummingbirds; carpets of crimson bunchberries; massed spires of cardinal-flower beside a brook of brown wood-water; purple-fringed orchids at the height of land above the Swift River Interval; white lilies hiding the water of tiny ponds where turtles sunned themselves on fallen logs; clearwing moths hovering over thistle-heads and slim blue damsel flies poising over the massed pickerelweeds.

And over and over again there came to my mind two quotations picked up long ago and remembered many times in the intervening years — a phrase from "Forest Runes," by George Sears, who wrote under the pseudonym of "Nessmuk," "our lot is cast in very pleasant places," and another line from Henry Van Dyke, which so aptly describes our random wanderings through this ever-charming region, "that is a pleasant pilgrimage in which the journey itself is a part of the destination."

Very few of the thousands who are reached by our educational staff in their courses on Natural Science and Conservation will become scientists or naturalists, but even a slight acquaintance with Nature in its many forms can add tremendously to one's resources, whether on a summer vacation or engaged in most of life's activities. The poet Bryant wrote,

"To him who, in the love of Nature, holds
Communion with her visible forms,
She speaks a various language."

We miss a lot if on our travels we are too hurried or too ignorant to "Stop, Look, and Listen!"

J. B. M.

Spring Migration in Nova Scotia

BY HARRISON F. LEWIS



Although Nova Scotia has no high mountains, it contains almost as great a variety of climates as if it were mountainous. The principal point to be made, in the present connection, is that, climatically, Nova Scotia is upside down. That is to say that, using the Merriam Life Zone terminology, the Transition Zone part of the province is north of much of the Canadian Zone part of the province. This is because the Atlantic Ocean causes cool summers along the "south shore," fronting on the sea, while more sheltered areas in the interior have much warmer summers. What the ocean really does, of course, is to make the climate of adjacent land more equable, reducing extremes of temperature in both summer and winter, so that Nova Scotia's "south shore," near which I live, is also milder in winter than is the interior of the province.

The south shore is also the dampest part of the province, having an annual precipitation of about 55 inches and a good deal of summer fog.

The fact that Nova Scotia is almost an island, connected with the rest of North America by a comparatively narrow land bridge, presumably affects migration routes. Just what these routes are and how they are affected are matters yet to be worked out, but I would hazard the guess that the effect is different for different species of land birds. Some may normally cross boldly from Cape Cod to Yarmouth; others may seek a shorter water crossing and fly from Grand Manan to Digby Neck; while yet others may prefer to travel over land practically all the way.

Several species, such as the Bobolink, Baltimore Oriole, Red-winged Blackbird, Kingbird, Chipping Sparrow, and Rose-breasted Grosbeak, which are fairly common breeders in the Transition areas of the province, seldom or

never breed in this vicinity (West Middle Sable, Shelburne County, Nova Scotia), and would not be transients here if they followed either direct routes or routes that avoid water crossings. They do occur here as irregular transients, presumably in consequence of some straying or some widening of the migration path under certain weather conditions. In the spring of 1953 I found no Bobolinks or Baltimore Orioles, but Kingbirds were fairly numerous and I recorded two Red-winged Blackbirds. This spring I saw two Bobolinks and two or three Baltimore Orioles, also a male Red-winged Blackbird on June 4 and a silent Kingbird on June 8.

One consequence of the conditions mentioned is that species that are commonly regarded as characteristic of different zones breed in close proximity to one another in southwestern Nova Scotia. Common nesting birds of the region include, on the one hand, Raven, Gray Jay, Pine Grosbeak, and Acadian Chickadee, and, on the other hand, Catbird, Wood Pewee, and Willet.

Known Occurrences of Strays in Shelburne County, Nova Scotia Spring of 1954

<i>Eastern Meadowlark</i> (There is said to be 1 N.S. breeding record)			
April 7	Louis Head Beach	1	H.F.L.
<i>Barn Swallow</i> (due about April 29)			
"Second week in April" Sable River			
April 14	Louis Head Beach	2	Vincent Dunlop
		1	H.F.L.
<i>Rose-breasted Grosbeak</i>			
April 18	North East Harbor	1 male	Mr. and Mrs. Fred Doane
<i>Indigo Bunting</i> (not known to breed in N.S.)			
April 18	Near Shelburne Town	10-15	Mr. and Mrs. Donald Robertson
April 18	Villagedale	a pair	Mrs. John Black
April 18	West Middle Sable	1 male	H.F.L.
April 24	West Middle Sable	1 male	Mrs. H.F.L.
May 2, 3	Clyde River	1 male	Mrs. Ethel Cronk
May 13	Bon Portage Island	1 male	Mrs. E. M. Richardson
May 15	Bon Portage Island	1 male	Mrs. E. M. Richardson
(From outside Shelburne County I have a report of a male Indigo Bunting in Halifax on April 19 and of one at Waverley, near Halifax, on the same day.)			
<i>Catbird</i> (breeds, due to arrive about May 21)			
April 22	Bon Portage Island	1	Mrs. E. M. Richardson
May 3	West Middle Sable	1	H.F.L.
May 8	Bon Portage Island	3	H.F.L.
<i>Field Sparrow</i> (first sure record for Nova Scotia)			
May 9	Bon Portage Island	1	H.F.L.

I observed this Field Sparrow under excellent light conditions, using x6 binocular, while it fed in an open, little-used road on flowers of stunted grass. I have had a good deal of field experience with the species in Ontario and the United States and I recognized it at once, but I observed it with painstaking care at distances varying from 25 to 15 feet. After watching it for about 15 minutes, I withdrew, consulted Peterson's *Guide and Portraits of New England Birds*, and then returned to the sparrow, which was still feeding in the same place. I again watched it for 15 minutes or more, under the same conditions, and could have watched it still longer had there been any point in my doing so. I noted its size and general coloration, including pinkish bill, light brown cap, light brown line from each rear angle of cap extending downward and forward in curve on cheek to a point below the eye; narrow white lower eyelid, no spot in center of breast, brown patch with definite margin on each side of breast in front of bend of wing, two wing bars (not pronounced), grayish tail and pinkish-brown legs.

Except for a few days about April 20, the spring of 1954 in this area was cold and backward. Last frost on May 28. A rainless period began on April 18 and continued for about three weeks. Otherwise, precipitation was normal. Migration was inclined to be late during most of the period.

The following record of migration arrivals relates to West Middle Sable and vicinity. Observations were made by me except as otherwise noted. I

was absent from the area March 2-17, April 20-28, and May 8-10. Species for which I feel that I failed to obtain a reasonably good arrival date are omitted. I am not at a good shore bird area, but visit a moderately good one frequently and a very good one occasionally.

1954

March	23	Piping Plover	May	14	Magnolia Warbler
"	24	Marsh Hawk	"	14	Black-bellied Plover
"	25	Sanderling	"	15	Oven-bird
"	25	Green-winged Teal	"	15	Least Flycatcher
"	25	Song Sparrow	"	15	Black and White Warbler
"	25	Rusty Blackbird	"	16	Cape May Warbler
"	28	Junco	"	18	Cliff Swallow
"	25	Robin	"	18	Chestnut-sided Warbler
"	28	Robin	"	18	Black-throated Blue Warbler
April	2	Great Blue Heron	"	18	Olive-sided Flycatcher
"	8	Flicker (possibly a bird that had wintered in N.S.)	"	18	Spotted Sandpiper
"	9	Bronzed Grackle	"	19	Common Tern
"	9	Myrtle Warbler	"	19	Chimney Swift
"	10	Phoebe	"	20	Baltimore Oriole
"	10	Ruby-crowned Kinglet	"	20	Bobolink
"	10	Belted Kingfisher	"	20	Blackburnian Warbler
"	11	Osprey (Eugene Ryan)	"	21	Lesser Yellow-Legs
"	12	Tree Swallow	"	23	Semipalmated Plover
"	13	Swamp Sparrow	"	23	Olive-backed Thrush
"	14	Double-crested Cormorant	"	23	Goldfinch
"	19	Yellow Palm Warbler	"	24	Yellow-bellied Flycatcher
"	25	Willet (Mrs. H.F.L.)	"	30	Alder Flycatcher
"	29	Hermit Thrush (may have arrived earlier)	"	31	Wilson's Warbler
"	30	Purple Finch	"	31	Black-poll Warbler
May	1	Blue-headed Vireo	"	31	Canada Warbler
"	1	Winter Wren	"	31	Veery
"	11	Parula Warbler	"	31	Red-eyed Vireo
"	13	Yellow Warbler	"	31	Wood Pewee
"	13	Black-throated Green Warbler	"	31	Nighthawk
"	14	Redstart	June	1	Dowitcher
"	14	Nashville Warbler	"	1	Ruddy Turnstone
"	14	Yellow-throat	"	2	Tennessee Warbler
			"	2	Cedar Waxwing

May 31 was a very fine day after a succession of days unfavorable for migration.

The migration now, June 3, is not yet complete. I have seen neither Black-billed Cuckoo nor Acadian Sharp-tailed Sparrow, though I have been on the lookout for them. The latter is a regular component of our summer avifauna, but is about the last migrant to arrive here. (I wonder if this indicates that it follows the shore all the way around the Bay of Fundy.)

Bird Study Course

As part of our adult education program, we are offering a Bird Study Course this fall, using mounted specimens and materials in the collections at Audubon House. Eight meetings will be held, stressing the birds of this region and beginning with the Land Birds. Each evening session will be devoted to the identification and relationships of groups of birds, as seen in the field or in the hand. Beginners as well as advanced students will be admitted.

The first meeting will be at Audubon House, October 19, at 7:15 P.M. The times of the other sessions will be arranged at that meeting, to suit the convenience of the group. The instructor will be Robert L. Grayce, Curator of Specimens, Massachusetts Audubon Society.

Birding on an Indian Campus

BY JEAN BURCH



A Banyan Tree.

Last October I arrived at college in Madras armed with a book on Indian birds and my binocular. I knew the college was in the city and I was a bit pessimistic about the birding possibilities, but I was pleasantly surprised to discover that the campus was fairly large and had many trees. I was soon to find out that these trees were populated with birds of many species.

The first bird I met with in Madras was the Spotted Owlet. It was late at night when I arrived at college exhausted. Just as I was dropping off to sleep, I was startled by horrible shrieks outside my win-

dow. The general effect was something between a catfight and a third-rate murder movie. When I was told the next morning that the sounds were probably made by owls, I said that even owls could not make such hideous noises. Later, however, I discovered that the noises were indeed made by owls.

I soon got used to the racket the Spotted Owlets made each day at dusk and at intervals during the night, and it was not long before I came to know them by sight as well as by sound. The first one I saw was sitting on a branch in the bright sunlight. It looked rather like a Screech Owl without ear-tufts. For a while it bobbed its head up and down at me in a most comical fashion and then flew away. Later, whenever I felt the need of entertainment I went to the same tree and watched the owl going through its amusing motions.

Evidently Indian owls have the same problem American owls have of being pestered by crows. I once saw two owlets being so annoyed by several crows. One owl flew off, but the other stubbornly remained.

An Owlet frequently perched on a wire outside my window at night, affording great amusement to my roommates and me. We turned a flashlight on the bird and watched it bob up and down, always expecting it to lose its balance on the wire — which it never did. In the morning I often found small round pellets on the roof of our dormitory. The Spotted Owlets were common on the campus and helped rouse interest in birds by their antics.

I think perhaps the most insolent creature on earth is the Common House Crow. These birds are bold and destructive, and as the windows of the dormitory were unscreened there was no way of keeping the intruders out. They entered the rooms fearlessly, no matter how many people were present. No amount of noise or threatening motion caused them to move, and a well-aimed shoe only made them hop a few inches to one side. They overturned the wastebasket several times a day and strewed its contents around the room. Any cosmetic jar or bottle of ink left on a desk or table was knocked to the floor. Toothbrushes, pencils, handkerchiefs, and rings disappeared. On one occasion I was sitting at a table when suddenly a Crow snatched the tablecloth and flew with it out of the window.

Another annoying habit of the Indian Crow was its constant cawing. Imagine, if you can, anything more disturbing when trying to take a nap than to have a loudly cawing Crow perched on the foot of your bed. And yet, it wasn't so much the noise as the audacity of the bird that kept one awake.

Even more exasperating was the Crow's habit of tearing up books and packages. I spent several months at a hospital where the chief occupation of these birds was taking thermometers and dropping them on the floor. They seemed to seize anything that was not locked up. They even removed sticks from hasps to open boxes. They would also peck at the eyes of babies in the infants' wards, and twice I saw Crows playing with sterilized needles and instruments in the nurses' office.



The Common House Crow.

One of the most majestic birds in flight is the Neophron, or Egyptian Vulture. It is pure white with black primaries. The bird's beauty lessens, however, the nearer one approaches it. Its yellow head is bald, except for a few straggly feathers, which makes the Vulture look like an advertisement for Wildroot Cream Oil. A pair of these birds decided to nest on a ledge above the door of the science building. This nest was no doubt interesting and educational, but the food of these Vultures was of so revolting a nature, and especially if it happened to drop on the head of a student entering the building, that finally a man was sent to the roof to remove the nest. However, the Vultures immediately began rebuilding. One bird stayed on the ledge to guard the nest from Crows while the other brought sticks. Regularly, once a week, the new nest was removed. I came to Madras in October, and when I left in April the battle between man and bird was still going on and the college was divided into two factions, provulture and antivulture.

One of my chief pleasures on week-end mornings was to sit on a swing under a small banyan tree. In this tree there were usually at least ten species of birds, and it was always full of action and color. Owlets bobbed up and down, Sparrow Hawks (accipiters) chased sparrows, Mynas quarreled or pecked at a wounded or sick bird or played with sticks and feathers, chartreuse parrots dangled upside down from the ends of twigs, Indian Grey Tits moved around chickadee-fashion, Drongos flew out a few feet from perches to catch insects like flycatchers, long-billed and brightly colored sunbirds darted around flowers and reminded one of hummingbirds, and Golden-backed Woodpeckers climbed the tree trunks. There was never any absence of color in the banyan tree. I saw the bright blue of jays (not related to our eastern North American Blue Jay) or the even brighter blue of a kingfisher. I saw bright yellow orioles and purple and yellow sunbirds. The most gaily colored bird was the Coppersmith, green with red and black and yellow markings.

When I was in the library, birds made it difficult for me to concentrate on my studies. Crows hopped over my books cawing raucously. Jungle Babblers, or "Seven Sisters," hopped around my feet — gray birds slightly smaller than Robins which seemed to travel in groups of seven. The pale-yellow eyes of

the Babblers give them a half-blind appearance, and they converse in high-pitched, weak, excited twitters. Another distraction was a Hoopoe's nest in a hole on the verandah. Hoopoes are handsome birds, about twelve inches long, with a black and white barred back and a rich tan crest which can be spread into a black-tipped fan. The parent birds visited the nest together every two or three minutes. One parent would squawk and this was followed by the chatter of the young birds and the appearance of two tiny heads at the nest-hole. There were several holes in a row, and the parents seemingly could not tell which was the nest until the young birds made a noise. I often watched the parent birds hopping on the ground gathering insects. One hopped a foot behind the other and sometimes opened its bill, whereupon its mate put something in its mouth. Further distraction to students was provided by orioles, kites, woodpeckers, sunbirds, vultures, and others in the trees outside the library. The vultures were especially unwelcome at examination time, as the students considered their repulsive appearance a bad omen.

One of my chief ambitions has always been to go to Florida to see the water birds. I should still like to go, but the need is not so pressing, for on Indian Independence Day in January a busload of us went to a water bird sanctuary several miles from Madras. On a tree-covered island in the middle of a shallow pond were storks, ibises, spoonbills, egrets, herons, night herons, and darters. Near the shore waded avocets and stilts, while in the water were cormorants and Little Grebes, similar to Pied-bills. There were also some ducks which I was told were teal, but they looked like Massachusetts Pintails. This sanctuary has been maintained for over a hundred years by the village assembly. The local farmers realize that these water birds are valuable in fertilizing the surrounding paddy fields.

On the campus and off I have succeeded in seeing a goodly number of species of Indian birds. Except for some of the water birds, the species I have seen differed from those with which I was familiar in America, though some have been similar and related to our crows, kingfishers, woodpeckers, chickadees, and others. The two exceptions are *Passer domesticus* and *Columba livia*, which are exactly the same. Even in India you cannot escape them. My book informs me that *Sturnus vulgaris* is also common in India, but so far I have been fortunate enough not to meet anything even remotely resembling a Starling.

Enthusiastic Teacher—Enthusiastic Class

BY MARJORIE E. SMITH

Every Audubon nature teacher is delighted to have her work carried on by the classroom teacher after her brief biweekly hour. Miss Hazel Tiedmann, who teaches grade six at the Commercial Street School in Adams, Massachusetts, is as keenly interested in the nature lessons as her pupils are. At the close of the period, she has supplementary material for the class.

Last spring the sixth grade joined the Audubon Junior Club. After the material arrived, Miss Tiedemann helped the class organize their club. They planned some bird walks, a visit to a feeding station, and a classroom exhibit of their projects.

On the day of the nature exhibit, the principal, Miss Armenia Degere, and the fifth grade were invited. A pupil announced the little program which followed, where the students either described their exhibits or demonstrated them.

Chalk drawings on the blackboard showed a purple trillium with the flower parts labeled, a plant cycle (flower-seed-tree), and a soil profile. The wall exhibits included posters on trees and soil conservation, and a map of the United States with pictures of the State birds. There was also a nest of the Red-eyed Vireo with jellybean "eggs" in it, and a colored drawing of the bird beside it. On the radiator in front of the windows was a diorama of pond life which had been made by two girls: a large carton placed on its side, then moss and other shrubs arranged around the "mirror" pond where clay birds and animals lived. Food chains were shown on a flannelboard: grain eaten by a mouse, which was, in turn, food for a fox or owl.

Each pupil had a nature notebook on his desk. The cover was decorated with an attractive bird, flower, or animal. Inside were the mimeographed lesson sheets, class notes, articles, and pictures of interest to the pupil. The principal was so pleased with the exhibit that she asked the sixth grade to give a repeat performance for the other grades in the school.

The previous summer Miss Tiedemann had been asked to conduct a nature class at the Adams Public Library on Saturdays. She said that the Audubon Nature Course materials were very helpful. She alternated an indoor class with one in the field. Pupils in her sixth grade class testified to the success of that enterprise.

What is the secret of such fine classroom spirit and interest? It is in the teacher.

Audubon Field Trips

SUNDAY, OCTOBER 17. To Newburyport, Artichoke, Rice Marshes, and other points in Essex County, for late migrants. Chartered bus will leave Audubon House, 155 Newbury Street, Boston, at 8:15 A.M., returning to Audubon House at 6:30 P.M. Bring lunch. Fare and guide fee, \$3.00. Fee for those using private cars and following bus, 75 cents.

SUNDAY, NOVEMBER 21. South Shore and Lakeville area, for ducks. Same arrangements and fees as for October trip. Leaders: Sibley Higginbotham, Robert Fox, C. Russell Mason, and Ruth P. Emery.

Reservations for all trips should be made at least a week in advance, and if by telephone, before 5:00 P.M. Cancellations cannot be accepted after Friday noon preceding date of any trip.

Brookline Bird Club Trips

Open to Members of the Massachusetts Audubon Society

Oct. 2, all day. Sudbury, Wayside Inn and vicinity. Miss Caldwell, 73 Foster St., Littleton. Afternoon, Wayland. Miss Cushman, Blgelow 4-7613.

Oct. 9, all day. Newburyport and vicinity. Mr. Leadbeater, Beverly 4205.

Oct. 10, afternoon. Concord, U. S. Wildlife Refuge. Miss Collins, OLYmpic 3-7359.

Oct. 12, all day. Ipswich and vicinity. Robert Hogg, CRystal 9-3431-W.

Oct. 16, all day. Newburyport, Artichoke, and Rice Marshes. Mrs. Argue, KENmore 6-3604. Afternoon, Fresh Pond, Cambridge. Mr. O'Gorman, KIRkland 7-5797.

Oct. 23, all day. Concord. U. S. Wildlife Refuge. Afternoon. Concord, U. S. Wildlife Refuge. Leaders to be announced.

Oct. 30, all day. Ipswich, Clark's Pond, and dunes. Afternoon, Fresh Pond, Cambridge. Leaders to be announced.

Nov. 6, all day. Newburyport and the Artichoke. Mr. Walsh, Beverly 1470. Afternoon, Arnold Arboretum. Leader to be announced.

Nov. 11, all day. Rockport and Cape Ann. Leader to be announced.

Nov. 13, all day. Auto trip to Lakeville. Mrs. Argue, KENmore 6-3604. Afternoon, Nahant. Mrs. Boot, LYnn 8-0257.

Audubon Staff Changes and Additions



The Society is pleased to welcome to its editorial staff this autumn MARJORY BARTLETT SANGER, of Stow, who has taken part in several of the Audubon campouts and field trips of recent years. Also two articles by Mrs. Sanger have been published in the *Bulletin*, "Birds of the Mastigouche" (May, 1953) and "Birds of an Uncharted Island" (June, 1954).

Mrs. Sanger attended the Bryn Mawr School for Girls in Baltimore and later Wellesley College, from which she was graduated with a B.A. degree in English composition, receiving the highest award in this department for her thesis. She has written short stories, also poetry,

and is currently at work on a second novel. She has studied art and music and continues these interests as hobbies. She also has a keen interest in bird life and enthusiasm for the out-of-doors in general.

During World War II, Mrs. Sanger was stationed in Washington with the Office of Scientific Research and Development, where she co-ordinated material sent to Washington by scientists working on government and war projects throughout the country.

ALICE ANN WILLIAMS, of Elizabeth, New Jersey, joined the staff at Audubon House in April and in the early summer was assigned to educational work in connection with the summer camp program. She is at present a member of the teaching staff in eastern Massachusetts.

In 1952 Miss Williams received a B.A. degree from Cornell University, where she specialized in English literature and the sciences. While in college she was a member of the Cornell Sports Club and the Ornithology Club and was treasurer of the Women's Athletic Association. She is a member of the English Honor Society. Her interest in natural history led her to work with the girl scouts in their nature program and also to participate in field trips both at Cornell and since coming to New England. She has studied music, especially the piano. She enjoys travel and made trips to Europe in 1951 and 1953, the latter trip including the Coronation celebration in England. On both trips she says her knowledge of French proved useful.



Prior to coming with the Society, Miss Williams was on the staff of the *Atlantic Monthly*, first as assistant to the managing editor and later transferred to the production department.

Miss Williams is a member of The Bookbuilders of Boston, a society for lithographic arts, and she is treasurer of the Boston Chapter of the Cornell Women's Alumnae Association.



Training School of the Worcester Museum of Natural History at Paxton.

Also added to the teaching staff in eastern Massachusetts this autumn is DORIS R. MANLEY, formerly of Princeton, New Jersey, who, with her husband, James W. Manley, and their son Douglas, toured New England camps this past summer with the "Covered Wagon" of the Massachusetts Conservation Council. Mrs. Manley took her biological work at Mount Holyoke College and at McGill University in Montreal. She is interested in all types of crafts and followed art as a minor subject at college. Other college activities and interests included folk songs, hiking, hosteling, camping, dramatics, and public speaking. She has received prizes for literature. While a resident in Baltimore, she carried on a very successful history program for children over the WAAM television. The Society was also looking forward to Mr. Manley's service with us this winter, but he was called, instead, into the service of his country.

ANTHONY THURSTON, of Morningdale, Massachusetts, joined the staff of the Society September 1 to augment the teaching program in the Worcester city schools. He comes to the Audubon work with a thorough grounding in natural science. Prior to attending Clark University, where he was graduated with an A.B. degree, he had studied at the New York State Rangers School and the University of Massachusetts, as well as at the Overseas College of the United States Army. His special interests are nature photography and geology. He has contributed frequently to *Rocks and Minerals* magazine and supplied material for Clay Perry's book *Underground Empire*. During the past summer he was associated with the Wendell Phillips Nature



Bird Summary and Field Notes

By RUTH P. EMERY

The summer was quite cool and pleasant with no prolonged heat waves, but the song season was very short this year because of the late arrival of many of the species. A good flight of SHEARWATERS in August correlated with the numbers of bluefish and tuna which fishermen were reporting off Cape Cod. The hurricane of August 31st disrupted this concentration, however, and only a few SHEARWATERS and JAEGERs could be found after this disturbance. Some of our members added several pelagic birds to their year's list by taking trips on the Provincetown boat.

AMERICAN EGRETS appeared at 15 different places with a maximum of 34 seen at Tiverton, R. I., on July 25 (G. Baker), and were found nesting in two places in Massachusetts, constituting State records. SNOWY EGRETS were present at South Dartmouth, Hampton, N. H., and Seapowet, R. I. A single LOUISIANA HERON at South Hanson on August 8 was observed by Mrs. Ruth Emery and Sibley Higginbotham as it flew back and forth in the swamp. A total of 10 LITTLE BLUE HERONS was reported, and YELLOW-CROWNED NIGHT HERONS nested successfully at Plum Island. A GLOSSY IBIS appeared at Plum Island on June 20 and was last seen on July 6. Another was reported from Damariscotta, Maine, on August 8 (Philip A. Trickey). This bird apparently had been present for some time before this date, according to local residents. Six half-grown RUFFED GROUSE were flushed at Plum Island on August 21. There was an early migration of adult shore birds. Two BUFF-BREASTED SANDPIPERS were first noted in Newbury on August 24 by Mrs. C. deWindt. Up to 4 MARBLED GODWITS were seen at Monomoy, and 33 HUDSONIAN GODWITS were counted there on July 31. Outstanding rarities included 2 WILSON'S PLOVERS at Seabrook, N. H., June 2 (deWindt), 2 BLACK-NECKED STILTS on Martha's Vineyard, June 12 (Bigelow), and most outstanding of all was a RUFF at Newbury on July 20 (deWindt) and one at Nantucket on August 10 (Whittles and Heywoods). GOLDEN PLOVERS were reported at Newburyport from mid-August on, with numbers increasing to 32 on September 6. A WILSON'S PHALAROPE was first observed at Nauset on August 2 (C. R. Masons) and remained there for a few days. A GLAUCOUS GULL was most unusual at Monomoy, July 31, and an oiled ICELAND GULL at Rockport was reported by John Kieran in July. EUROPEAN BLACK-HEADED GULLS were reported from Scituate, Quincy, and Newburyport. A FRANKLIN'S GULL at Marshfield on August 22 was unusual. At Nauset an adult SABINE'S GULL was first seen on August 15 (Bartlett) and again on August 25 (C. R. Masons).

Dr. Oliver L. Austin, Sr., reports that the Cape Cod tern colonies enjoyed an especially successful season, almost equalling that of last year, which was the best on record. By far the largest colony is now located at the end of Plymouth Beach, with a population of just under 15,000 birds. LEAST TERNS, like the PIPING PLOVERS, continue to suffer heavy losses from the automobiles on every beach. A single ROYAL TERN was reported from Monomoy, July 17 and 18, and a GULL-BILLED TERN, August 7 (MacLay). FORSTER'S TERNS were reported from August 4 on, and a CASPIAN TERN was seen at Plum Island, August 29 (P. W. Smith). A few BLACK TERNS were noted.

A BLACK SKIMMER was observed in Norwalk, Conn., on July 3 and 5 by J. Malkin. The July population of MOURNING DOVES at the Parker River Refuge was 120, as reported by G. T. Nightingale, Manager. BARN OWLS nested successfully at Ipswich, Sakonnet Point, R. I., and Rocky Hill, Conn. An adult NIGHTHAWK was seen on a roof on Newbury Street, Boston, where it was protecting one young. Migrating flocks were noted from mid-August on. A sea-going HUMMINGBIRD, six miles off Chatham, was observed by James Baird and party on September 6, and one flew into a room at the home of Miss B. A. Saunders in Ipswich, attracted by the blossoms on some African violet plants from which it was trying to get nectar. BANK and BARN SWALLOWS were moving south steadily from July 10 on. There was a big flight of RED-BREASTED NUTHATCHES, August 20-23. BROWN CREEPERS were nesting at Wallingford, Conn., the young hatching June 20. Two singing male WHITE-EYED VIREOS were found in Marshfield Hills in late June and early July. A YELLOW-BREASTED CHAT nested in W. Newbury, but not successfully. Two WORM-EATING WARBLERS were seen and heard in Belmont on August 4 by Mrs. Karl Zerbe. On July 10 Mr. and Mrs. Sibley Higginbotham observed 2 male YELLOW PALM WARBLERS in Harrington, Me., in nesting territory in a sphagnum bog. Up to 3 HOODED WARBLERS were enjoyed by many observers at the Marblehead Sanctuary, August 27 to 30. In May Dr. Norman P. Hill found a male HOODED WARBLER singing in Fall River, 5-6 miles from the Rhode

Island breeding station, and on July 2 a female was feeding a single young bird just able to fly. This is the first breeding record for Massachusetts.

BOBOLINKS were migrating at Jefferson, Me., on July 24. DICKCISSELS were reported from Ipswich, Monomoy, Duxbury, W. Newbury, Plum I., Newburyport, S. Orleans, Taunton, and Tiverton, R. I., from August 12 on. Richard Hayes noted 2 EVENING GROSBILLS in Lunenburg on June 23, and Mrs. Warren Thayer reports two in Lancaster, where they were observed throughout July. As many as 25 were seen in Franconia, N. H., during July and August by Mrs. Howard C. Maybury. Several young birds were in the group. In South Londonderry, Vt., Mrs. James Downs tells us female EVENING GROSBILLS were fed only the buds and salty earth by the males until May 21. Thereafter it was sunflower seeds in the feeder. On June 26 the young were brought to the feeder. Mrs. Downs reports that during June she saw EVENING GROSBILLS at four different places in Vermont, and during July she banded 36. A family of 4 was observed in Sherburne Pass., Vt., by Miss Elizabeth Gillingham, and 5 were also reported from Smuggler's Notch (Mt. Mansfield), Vt. Joseph Ulman reports that they were very obvious in the Rangeley, Me., area, but no CROSSBILLS of either species could be found. William P. Wharton banded an immature male RED CROSSBILL in Groton on July 12. About 20 pairs of GRASSHOPPER SPARROWS nested at the N. Andover airport, which Oscar Root says is the "best count ever." Three LARK SPARROWS were found at Plum I., Hingham, and Annisquam. Bertram Leadbeater reported a WHITE-CROWNED SPARROW at W. Newbury on August 27. WHITE-THROATED SPARROWS were found well south of their breeding range in Weston and Bedford in July (Morgan, Clemensson). A LINCOLN'S SPARROW was seen in S. Lincoln, Me., on July 11 in a sphagnum bog, probably on nesting ground (Higginbothams).

And now for the frosting on the cake! Hurricane Carol moved up the Atlantic Coast on August 31, and at the Weather Bureau at Logan Airport in Boston a peak gust of 100 m.p.h. was recorded at 12:26 P.M. With it came CORY'S SHEARWATER, 1 at Nauset, and 1 at Gloucester; LEACH'S PETREL, 1 (dead) at Lincoln, 1 (dead) at Chatham where 2-3 others were seen; WILSON'S PETREL, 1 at Cambridge (Charles River), 1 at Lynn marshes, a flock at Gloucester, and 625 seen off Provincetown; RUFF, 1 reported at Nauset, September 3 (Griscom party), and 1 at Provincetown September 4 (R. H. Ives Gammell); RED PHALAROPE, reported from Nauset and off Provincetown; NORTHERN PHALAROPE, reported from Quincy, Salem (50), Nauset, Chatham (2 places), and off Provincetown (675); GULL-BILLED TERN, 1 at Nantucket, and 1 at Provincetown; COMMON TERN, reported inland from Stow (2), Wellesley (2), Wayland (200), Andover (400), and N. Andover (75); ROSEATE TERN, reported inland from Andover and N. Andover (10); SOOTY TERN, reported from Andover (2), Wayland (2), Sagamore (1), Provincetown (2), Scituate (1), Belmont (2), Plum I. (1 specimen given to Massachusetts Audubon Society), and Hog Island, Me. (3); LEAST TERN, reported inland from Andover (25) and Concord (1); ROYAL TERN, reported from Scituate, Nantucket, Ipswich, Plum I., and Nauset (2); CABOT'S TERN, 1 at Nauset; CASPIAN TERN, Squantum, Wayland (2), Lynn, Nantucket, Salisbury, Quincy, Monomoy (2), and Little Compton, R. I.; BLACK TERN, reported from Wayland (10), Squantum (15), Wollaston (20), Quincy (2), N. Andover (2), Westport Harbor (5), and 17 off Provincetown; BLACK SKIMMER, reported from 14 places, with flocks building up to 152 at Nauset by September 6, and up to 100 at Westport Harbor by September 7.

Although this hurricane caused great damage along the New England coast, observers afield could not help but enjoy the sight of these unexpected visitors.

Small Mammals of Arcadia, IV. *Microtus*

By B. ELIZABETH HORNER, J. MARY TAYLOR,
AND DORCAS L. EASON

Illustrations by Kathleen Taylor



when examined at close range. Its hairs are of noticeably different lengths and stand out at a considerable angle from the body; and its appearance, consequently, is shaggy rather than sleek and well groomed as in *peromyscus*.

Among the favored dwelling places of *microtus* are fields, meadows, marshes, and swamps. In spring when water covers the soil surface of meadows the mouse may be forced to swim from hummock to hummock as it carries on various of its activities. A good swimmer, it is enabled by its thick, water-resistant pelage to endure long periods of exposure to wet and cold; an adaptable animal, it makes ready use of the homes of other animals. In the Middle West it has been known to raise its families in the nests of Long-billed Marsh Wrens, and in tidal marshes it sometimes protects itself from high tides by building nests inside muskrat houses. If the muskrat house is vacant the mouse may build within the main chamber, which is connected to the outside by openings below the water level. Should the muskrat lodge be occupied, however, the mouse may burrow into the roof of the structure and there make itself comfortable. When disturbed it will quickly dive into the water and swim to safety, sometimes propelling itself under water for a considerable distance before coming to the surface.

At the Arcadia Wildlife Sanctuary the swimming of *microtus* is restricted largely to short periods during the springtime when the grassy meadow in which it is most abundant is partly submerged. Additional evidence of *microtus* activity in the Sanctuary is manifest in woodland clearings and wherever else there is sufficient grass and low-growing foliage to provide food and cover.

From the burrow openings, narrow and sharply defined runways ramify through the surface vegetation and very effectively conceal the animal from enemies which may be lurking near by. The networks of neat little runways are made by cropping the plants at ground level. Grass stems overhanging the paths transform them into miniature tunnels. The numbers of cut-grass stalks and dark-green fecal pellets scattered along the runways indicate the extent to which they are traveled by microtus. It is not uncommon, of course, for the highways made by one animal to be used by other animals as well; and just as White-footed Mice and shrews may travel along the small microtus lanes, microtus may itself make use of borrowed thoroughfares.

Selecting soft plant fibers as building material the Meadow Mouse constructs its nest in underground burrows or beneath a fallen log. Within the confines of this nest litter after litter may be born, for microtus is one of the most prolific of all mammals. After a gestation period of three weeks, one to ten young are born. For the first few days they are naked, blind, and helpless; but soon short velvety fur envelops the tiny forms, and by the eighth or ninth day their eyes are open. In two weeks or so the young are weaned, and before they are one month old the females of the litter may be ready to begin their own families. Family duties once begun, they may continue



into November, ceasing then only for a brief winter respite. When the ground becomes frozen microtus abandons its burrows and lives entirely above ground, excavating tunnels in the snow. Like *peromyscus* and *blarina*, microtus does not hibernate but continues its foraging as weather permits throughout the winter. In early spring it returns to its subterranean lodgings, leaving its winter nests of dried grass behind to be revealed by the melting snows.

The diet of the Meadow Mouse consists largely of such vegetation as it can easily cut off near the ground. Long slender stalks of alfalfa are deftly brought to earth by the sharp yellow incisor teeth, and the tender leaves are quickly stripped from the stem. In foraging among the grasses of a hayfield where the stalks are so tightly packed that they are not easily felled, microtus cuts away short sections of stem until the highly prized terminal portion of the grass can be pulled into reach. In fall and winter many kinds of seeds, including nuts and grains, are added to its diet. Tubers, bulbs, insects, and snails are also devoured. When food becomes scarce, the mice eat the inner bark and tender cambium layer from shrubs, trees, and vines; and they are to be held suspect whenever a small tree is discovered girdled close to the ground. In agricultural areas they are often serious pests; their prodigious appetites rendering them overly appreciative of the farmer's efforts.

The natural enemies of microtus are everywhere and among mammals range from foxes and bobcats to tiny shrews. Of the birds many of the hawks and owls, and the bitterns, herons, crows, jays, and shrikes take a heavy toll of this mouse. Most of the large snakes prey upon it, and even a fish, bullfrog, or snapping turtle may snatch up a mouse that has been caught in the current.

Meadow Mice, like the Scandinavian lemmings which every four years or so pour into the sea in vast hordes, undergo marked cyclical fluctuation in numbers. These numbers occasionally reach plague proportions, with hundreds of mice forming veritable demolition squads as they eat their way from one area to another. These plagues of mice have perhaps played greater havoc in France than anywhere else; and it was undoubtedly not with feelings akin to amusement that the British Army, fighting along the Western Front in the winter of 1917-18, discovered these mice to be so numerous as to forsake their usual shyness and take cover at night under the ground sheets of the sleeping soldiers. Mouse plagues have been frequent, too, in Germany and Italy; and even the United States has not escaped the spectacular effects of particularly high cyclical peaks. Among the most devastating of these was the Nevada outbreak of 1906-7, which ravaged thousands of acres of hay, alfalfa, root crops, and potatoes. Census takers of mice have estimated the numbers of *microtus* per acre at such times to be as many as several thousand, which is quite different from a normal residency of perhaps ten to one hundred for that same area.

What causes these outbreaks nobody knows, but they have long been recognized and frequently described. Biblical authors wrote of them and so did Aristotle. Although population peaks may be heightened by man's methods of land utilization, the cycles are in large measure independent of the activities of man. Various hypotheses have been advanced to explain the rhythmical building up and breaking down of rodent populations, suggested causes running the gamut from sunspots to bacteria. Studying *microtus* cycles in New York State, Dr. Hamilton, of Cornell University, found that following the low point of the cycle there was a gradual increase both in number of young per litter and number of litters per year, the lengthening of the reproductive season accounting for the greater number of litters. Under such conditions it seems quite reasonable that a time may arrive when the habitat will be overpopulated, the number of resident mice exceeding the limits of the food supply. Competition may be presumed to become greater and resistance to disease, parasitism, temperature extremes, fatigue, and repeated pregnancy, lessened. Having thus grown beyond optimum relationships with the environment, the population may now fall ready prey to factors otherwise incapable of exerting mass havoc and thus be brought to another low point. Conditions now reversed, the way seems clear for a new rising tide in population numbers.

The complete explanation of *microtus* population cycles is actually far more complex than that suggested above, and much remains to be discovered about the manifold interactions of environment and population which bring about these periodic levels of scarcity and abundance. The animals which exhibit cyclical abundance are by no means limited to rodents, and the rodents involved are by no means limited to *microtus*. Where plagues are concerned, however, mice (including *microtus*) are usually considered the most destructive. The historical study of plagues reveals offending mice to have been at one time or another worshipped, threatened, poisoned, or even banished from the church. Always, to be sure, the mice reduced in numbers, although the effectiveness of man's contribution has been, perhaps, debatable. Dr. Elton, of England, who is one of the world's foremost authorities on animal populations, has rather succinctly described the pattern of mouse plagues in the following manner: Mice multiply. Destruction of crops is rampant. People dismay and demands are made of Authority. Authority appoints a Committee of Experts. The Experts prescribe a Cure. The Cure may take the form of Holy Water, a

Prayer, a new Committee, a Bacterium, a Bomb, a Trap, or a Pied Piper. No matter what the Cure, it always works if given time. Also, no matter what the Cure, it has never yet been found to prevent the next outbreak!

Perhaps the best lesson to be learned from Dr. Elton's description is that of humility; for despite man's most intelligent and persistent efforts the "wee" and "tim'rous beasties" remain indomitable.

(This is the last of a series of four articles on the small mammals of the Arcadia Wildlife Sanctuary.)

Around the Season at Evergreen!

Earlier in the year Lydia Gstell wrote us that 1953 had been one of the best at the Gstell's Evergreen Sanctuary in Berlin, Connecticut. They had many surprise packages, almost by the month. They prepared "Highlights" which were hung in the banding station for visitors to read.

Jan. 12 — Northern Shrike, adult.

Jan. 31. — Tufted Titmouse; stayed 2½ months.

Feb. 12. — White-winged Crossbill; first record for yard.

May 6. — Orchard Oriole; first record for yard.

May 16. — Bay-breasted Warbler; first record for yard.

Aug. 10. — Carolina Wren; life bird; banded Jan., 1954.

Aug. 24. — Turkey Vulture, soaring over Sanctuary.

Sept. — Banded 39th Baltimore Oriole for *this* summer's record; attracted to the hummer nectar feeders.

Sept. 5. — Orchard Oriole, female; new bird for hummingbird feeder.

Oct. 15. — Dickcissel, female; banded Oct. 26, last seen Oct. 30.

Nov. 2. — Red-breasted Nuthatch; our second record.

Nov. 2. — Cardinal, male; our first record and 120th species. A 10-minute visit.

Nov. 24. — Dickcissel, second female; banded November, 1953.

Nov. 28. — Dickcissel, male in perfect plumage; our third of species.

Nov. 28. — Winter Wren; in yard several days.

Dec. 16. — Hermit Thrush; visited briefly.

Jan. 4, 1954. — Dickcissel No. 4, an immature male.

Let's hear from others who have had such surprises!

C. R. M.

The Berkshire Museum

Pittsfield, Massachusetts

Oct. 1-20. Third Annual Berkshire Art Association Show.

Oct. 1-31. Japanese Photographs, lent by Photographic Society of America.

Oct. 1, 8:00 P.M. Meeting of Hoffmann Bird Club.

Oct. 9, 8:00 A. M. Hoffmann Bird Club trip to October Mt.

Oct. 12, 10:15 A.M. Opening of 11th Annual Saturday Morning Nature Hours, sponsored by the Museum and the Massachusetts Audubon Society.

Oct. 13, 8:00 P.M. Meeting of Berkshire Museum Camera Club.

Oct. 17, 8:00 A.M. HBC field trip, Pittsfield and vicinity.

Oct. 29, 9:00 P.M. to 1:00 A.M. Hallowe'en Headdress Ball (at Hotel Wendell Sherwood, for benefit of Museum.)

(Other events to be announced)

Stay at Home Birding

BY MARION ZERBE

Since 1941 we have lived on a steep wooded hillside just south of Belmont Center. For all but the last three years of this period we were sublimely unconscious of the bird and animal life right in our own yard. Looking back on it now, it seems incredible, but we never noticed the spring bird flights at all, except to complain about being waked up so early. Certain local residents were too big or too bright to be overlooked, of course. A Scarlet Tanager feeding his young six feet from the porch rail is quite noticeable, and a Red-tailed Hawk right at the front door engaged in terrifying a Pheasant is bound to cause a certain commotion. I was also aware of the mice in the kitchen, the Woodchuck in the bean patch, and the Skunk in the garbage pail. But as for observing anything more subtle, I was too busy — dusting.

A friend did her best to correct this state of affairs. She gave us a Peterson's *Field Guide* and made a few approving remarks about the barberry bushes and the catbrier. I dusted the Peterson and chopped away at the bushes. But we still didn't look at any birds, although as the years went by we came to depend on the Wood Thrush's song to lift our spirits and mark the arrival of summer. Then, one year, we put up a feeder and made a little goldfish pool to provide moisture for Mr. Zerbe's fern collection. The results were quite spectacular. Birds came freely to eat and drink, and all we had to do was sit on the porch and watch. We unearthed the Peterson — still in mint condition — and began to learn a little something. At this point our friend offered again the help we wouldn't take before, and after a few field trips with her we were really caught. And we discovered that our hillside is particularly good for birding. It is part of a long ridge stretching from Waltham to Arlington, formed millions of years ago when the land to the east settled to make the Boston Basin and a much larger Massachusetts Bay. It is quite steep and cuts off the west wind so that migrating birds like to stop for a day or so to rest and feed. Owing to this lucky circumstance, we have acquired a yard list of 122 species.

After we had been bird watching for a while, I began to keep a kitchen window list. It is comparatively simple to do two things at once when one of them is routine, like dishwashing or ironing. (I used to read Shakespeare at such moments.) My kitchen window is large, eight feet by four. It overlooks three feeders and the pool, which is at the bottom of a ten-foot granite ledge. A little brooklet trickles down the rock (when we turn on the hose). In two years, eighty-nine species have come within view; some right in plain sight and others requiring a bit of gymnastics on my part. For example, to see a Canada Goose I had to put my head in the sink and peer straight up! It is all great fun and, although not much work gets done on certain spring days, I have found a hobby that won't wear out. For the most part, my family and friends are happy to co-operate, sometimes a little too much so! I well remember a certain beautiful (cardboard) Pileated Woodpecker!

But more interesting than keeping a list is trying to solve the mysteries that present themselves so frequently. Why did the Pheasant commit suicide? Who was the second Vireo — a son or a wife? Or just an old school friend? Just exactly what is the pecking order in a flock of finches? Do birds have a sixth sense we don't know about, or is it just extraordinary hearing?

"So Much for so Little"

Whence Our Members?

As readers of the *Bulletin* scan a somewhat impressive list of new members each month, the question may arise in the minds of many, Where do all these additions come from? An analysis of any list would disclose the fact that Audubon Members are recruited from a variety of sources. To be sure, the greatest number are individuals with a natural or acquired interest in wild-life protection who are eager to affiliate with and support an active conservation organization. Many have responded to personal or written invitations to join the Society. Not a few may have visited Audubon's store in quest of bird food, feeders, bird books, etc., or to avail themselves of the varied services we offer, and thus have learned of the advantages of Audubon membership. Other fruitful sources are field trips and campouts, the annual Audubon Nature Theatre, staff lectures to garden and women's clubs and other groups, our annual meeting, spring flower show, and the growing number of individuals who are attracting birds about the home as a family hobby.

Should this not indicate to all of us how really easy it would be to strengthen the cause of conservation by interesting others in an Audubon membership? Let us try.

We welcome the following new members who have joined the Society during the summer months. And, as always, we are very grateful for the increased support of our older members.

Patron

McQuesten, George E.,
Marblehead Neck

Life Members

***Achilles, H. Laurence,
New Canaan, Conn.
Elliott, Mrs. Herford N., Westford
*Guild, Miss Helen, Boston
***Lyman, Arthur T., Westwood
***Wallace, Dr. and Mrs. Richard
and Family Brookline

Contributing Members

**Batchelder, Mrs. G. L., Jr., Beverly
**Coombs, Mrs. Robert D., Duxbury
*Dennis, Mrs. James,
Old Bennington, Vt.
**Frost, Miss Clara D., Dover
*Greeley, William Roger, Boston
**Lane, J. Philip, Weston
**Mason, Mr. and Mrs. H. B.,
E. Bridgewater
**McNair, Malcolm P., Cambridge
Pearce, Edward D., 2nd, Boston
**Proctor, Mrs. George B., Marblehead
Tyringham Youth Center, Tyringham
*Woodbury, H. G., Wenham

Supporting Members

*Almy, Roger W., New Bedford
*Barron, Malcolm E., Beverly
Barry, Miss Alice E., Newton Hlds.
*Beaudette, Mrs. Ruth G., Watertown
*Benjamin, Mrs. B. Allen, Wayland
*Bixby, Miss Edith P., Cambridge
*Bullard, Mrs. Ralph E., Sharon

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*Cavanagh, Mrs. Paul B., Newton Hlds.
*Chapin, Miss Margaret L.,
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*Clark, Mrs. Ruth N., Melrose
*Clausen, Mrs. George W., Cohituate
Clements, MacMillan, Nantucket
*Coe, Henry, Rockport
*Copp, Belton, Old Lyme, Conn.
Davis, Ralph E., Jr., Swampscott
Davison, Mrs. R. H., Brookline
Dutton, Dr. David P., Stoneham
*Ellen, Miss Sarah, Fitchburg
Farnsworth, Raymond, Danvers
*Flynt, Miss Esther H., Bryn Mawr, Pa.
*Gardner, Edwin R., Swampscott
*Gardner, Mrs. Edwin R., Swampscott
Ginn & Company, Boston
Goodhue, Mrs. Albert, Marblehead
Griffith, Mrs. Carroll P., Wellesley
Halverstadt, Mrs. Herbert,
Winter Pk., Fla.
*Hart, Mrs. Charles E.,
Watertown, N. Y.
Harts Camp, Williamstown
*Hobbs, Mrs. Joseph R., Williamsburg
*Hubbard, Mrs. Edwin L., Webster
*Joslin, Robert A., Watertown
*Kavanaugh, J. B., Scituate
*Kimber, Mrs. Wilfred, Monson
*Manns, Miss Emily P., Joliet, Ill.
*Marriner, Mrs. K. W., E. Pepperell
Mayo, Miss Louise M., Chathamport
*McCullough, Mrs. Charles J.,
Wellesley

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 Leavitt, George A., Natick
 Lebert, Mrs. E. M., Newtonville
 Lipsohn, Mrs. Karl P., Hingham
 Lund, Mrs. G. E., Stoneham
 Lutts, Carlton G., Salem
 Lutts, Mrs. Carlton G., Salem
 Lutze, Miss Ruth Louise, Winthrop
 MacFarland, Jameson D., Northboro
 Macomber, Mrs. Paul C., N. Weymouth
 Mason, Miss Carol, Boston
 McGee, Miss Dorothy E., Natick
 Montgomery, Hugh, Amherst
 Montgomery, Mrs. Hugh, Amherst
 Moog, Mrs. Wilson T., Northampton
 Mulloney, Brian, Lee
 Munro, Dr. Rose C., Boston
 Naegele, Joseph, Lakewood, Ohio
 Neary, Edward J., Brighton
 Neely, Mrs. Alice E., Foxborough
 Nichols, Miss Helen L., Haverhill
 Northrop, Albert A., Lexington
 Overly, Mrs. Linda L., Nantucket
 Parfitt, Dr. John W., Manchester, N. H.
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 Piggott, Clayton L., Beverly
 Pike, Lawrence W., Melrose
 Pitman, Mrs. Lloyd E., Holyoke
 Pope, Mrs. Gardner W., Malden
 Proctor, William, Weston
 Pugh, Harry, Jr., Darien, Conn.

Pyle, Charles M., Jr., Chestnut Hill
 Quimby, Miss Bernice L., Jamaica Plain
 Riley, Mrs. John, Wollaston
 Robinson, Mrs. Albert S., Jr., Wollaston
 Rogers, Miss M. Louise, Boston
 Russell, Francis, Wellesley Hills
 Shaw, Donald H., Belmont
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 Swan, Mrs. Franklin R., Arlington
 Tait, Miss Barrie, Cresskill, N. J.
 Taylor, Miss Sarah Wingate, San Rafael, Cal.
 Vincent, Chandler, Pittsfield
 Viscidi, Dr. Philip C., Northampton
 Watson, Earl, Lynn
 Weber, Dr. Elizabeth S., S. Yarmouth
 Wheeler, Dr. Ralph E., Chestnut Hill
 Whetten, Mrs. Nathan L., Storrs, Conn.
 Wight, Miss Florence B., W. Springfield
 Wight, Mrs. Lawrence H., Hingham
 Wilbraham Library, Wilbraham
 Williamson, Mrs. George, Norwood
 Wolcott, Samuel H., Milton
 Wright, Mrs. Wm. H., Jr., Wellesley Hills
 Wyman, W. F., Dedham

May Morning Thrills

"I don't know what kind of birding the rest of the State has been having this damp May 8, but for thrills and surprises I suspect the 15 minutes I am about to recount will be hard to top!

"With six children between us and busy Saturday schedules, Mrs. Harold J. Donner and I didn't feel that we could get away for a whole morning of birding with the Middleboro group, so we took three youngsters with us for a brief early morning walk through a large meadow near Mrs. Donner's home on North Street, Middleboro.

"It was about 7:30 a.m., and we had just started down across the meadow which slopes toward the Nemasket River, when suddenly from directly overhead we heard a loud, melodious and wild-sounding call — quite unlike anything either of us had ever heard before. We looked up to see 14 Whistling Swans, necks outstretched, flying quite low and in a northeasterly direction. They were so low that we could see them perfectly — 300 feet perhaps.

"As we watched them out of sight I became aware of a sweet little song coming from the grass not far ahead of where we stood. I searched the area carefully through my binocular and soon spotted the conspicuously-marked head of a Lark Sparrow peering over a tussock of grass! We heard his lovely song several times before he flew off across the field, disclosing conspicuous white tail feathers.

"When he had disappeared, we started again across the meadow and saw ahead of us a female Wood Duck leading eight newly-hatched ducklings toward water. All this within 15 minutes!

"We spent another hour or so in the meadow and along the river and found many Yellow-throats, a Redstart, Redwings calling from the cattails, a Black-crowned Night Heron, a beautiful patch of trout lilies blooming in a shady spot, a Red Squirrel, bluets, violets and anemones, and the first of those primitive plants that I had ever studied, the horsetails. A nice morning, but anticlimax after the first 15 minutes."

Middleboro, Mass. Kathleen S. Anderson

1884 — Charles Benton Floyd — 1954



© BACHRACH

The passing of Charles Benton Floyd is a great loss to his family, to the community, to his intimate friends, and to the birds.

Floyd possessed a unique personality. Not only was he a successful business man and a good salesman (for over thirty years he was the New England division manager of the Fred Rueping Leather Company of Wisconsin), but he also had a keen interest in natural history, especially in the habits, migration, and protection of birds.

He took a great interest in Newton community affairs, where he lived. He was a member of the Board of Aldermen for fifteen years and its president for six years (the longest term ever held); chairman of the Newton campaign for the Community Fund in 1944, and metropolitan chairman of the Leather Division of the Speakers

Bureau. In the Newton Chapter of the American Red Cross he served as chairman of the disaster committee, and for over twenty years was a member of the executive committee. He was a former director of the Auburndale Co-operative Bank and an incorporator and trustee of the Newton Savings Bank, as well as a trustee of the Newton-Wellesley Hospital. As chairman of the Republican City Committee, he was always active in local, State, and national campaigns.

During the Korean war he served as a "dollar-a-year" man as chief of the Leather Division of the National Production Authority in Washington.

Floyd was a good organizer and was most helpful in the organization of the Northeastern Bird Banding Association in 1923, of which he became an officer. He was active in the organization of the Federation of Bird Clubs of New England in 1921 and remained its treasurer until it was taken over by the Massachusetts Audubon Society. He helped organize the South Shore Nature Club, of which he was also an officer, and, with the writer, was co-author of *Birds of the South Shore*, published by the South Shore Nature Club.

Floyd was an untiring bird enthusiast in the field. Even while he was in Washington serving on the NPA, he arose early every pleasant morning and walked through Rock Creek Park or along the Potomac River in search of birds, studying their habits and recording their identification.

When, with his help, the Northeastern Bird Banding Association was organized, for five years he joined with many others in banding Black-crowned Night Herons in Barnstable and Herring Gulls and Common and Roseate Terns at Penikese Island, and then devoted every vacation in July for twenty-two successive years to assisting Dr. Oliver H. Austin, Sr., in banding terns at Tern Island, Chatham, and all along the Cape Cod coast. His writings on the results of these banding projects appeared in the bulletin of the Northeastern Bird Banding Association from 1925-35.

Floyd joined the Nuttall Ornithological Club in 1917. He became a director of the Massachusetts Audubon Society in 1923 and continued in that position until 1941, when he was made an honorary vice-president of the Society.

I had the extreme privilege and pleasure of being closely associated with Charlie Floyd as a personal friend for thirty-four years. In all that time, under all the various conditions of our intimate association, I never once saw him become ruffled. I think that his composure was one of his greatest attributes. His courage was at all times great. This he showed after the death of his wife and also on receiving a diagnosis of a chronic condition.

Floyd had a particular aversion to birding with more than three people. He found he could accomplish more with small parties, and usually he was with but one companion when he made his largest records of migration.

He was a frequent visitor to "Lily Pond," Cohasset, throughout the year. One of his great joys was to walk with me in the woods on a moonlit night in June and spend several hours listening to the Whip-poor-will, the Barred Owl, and the night song of the Wood Pewee.

Charlie Floyd was a true friend and a charming companion, and he will be remembered by all who knew him.

LAURENCE B. FLETCHER

LOOKING AHEAD: SOME DATES TO REMEMBER

MEETINGS AT AUDUBON HOUSE

Boston Malacological Club

Oct. 5, 8:00 P.M.

Massachusetts Conservation Council

Oct. 6, 2:00 P.M.

Massachusetts Audubon Society

Oct. 13, Board of Directors, 3:00 P.M.

Old Colony Bird Club

Oct. 11, 25, 7:30 P.M.

MASSACHUSETTS AUDUBON

SOCIETY STAFF LECTURES

Oct. 25, Woodman Institute, Dover, N.H.

Nov. 1, Lynnfield Center Garden Club

Nov. 3, Winter Garden Club of Marblehead Neck

ADULT WORKSHOPS

AND COURSES

Oct. 19, Bird Study Course, 8 meetings. Audubon House. Tuesdays, at 7:15 P.M. Robert L. Grayce, Instructor.

Oct. 6 - Nov. 17, "Web of Life." Continuing Morning Intermediate Conservation and Natural Science Course. Field trips, Boston area,

10:00-12:00. Frances Sherburne, Instructor.

Oct. 7 - Nov. 4, "Web of Life." Continuing Evening Intermediate Conservation and Natural Science Course. Audubon House, 7:30-9:00. Frances Sherburne, Instructor.

AUDUBON FIELD TRIPS

Oct. 17. To Newburyport, Artichoke, and Rice Marshes. Leave Audubon House, 8:15 A.M.

Nov. 21. To South Shore and Lakeville area. Leave Audubon House, 8:15 A.M.

AT AUDUBON SANCTUARIES

Oct. 2. Cook's Canyon, Barre. Annual meeting of Northeastern Bird-Bandtag Association. 10:00 A.M.

Oct.-June. Saturdays. Clean-up Work Parties at Ipswich River Sanctuary, Topsfield.

NATURE CONSERVANCY

Annual Meeting at Crane's Beach, Oct. 9.

NATIONAL AUDUBON SOCIETY

Annual Convention, New York City, November 13-16.

Notes From the Sanctuaries

ARCADIA. During the summer the amount of money to be raised in the Connecticut Valley to help pay for the land acquired last fall shrank, mostly by reason of a contribution from a Friend of Arcadia not residing in the Valley. At this time there remains \$130 still to be raised. It is not a large sum, and it should be promptly shrunk to the substance of an autumn mist by a few friends of Arcadia who believe in the long-term value of conservation education and in the need for wholesome, non-destructive, outdoor recreation.

Arcadia's library also grew during the summer, about ten volumes being added. It is still not a large library, but it is of high caliber in our chosen field.

A successful Day Camp was held, Miss Shirley Howard being directly in charge. With the aid of the children, a fine collection of live exhibits found their way to the Science Workshop. Many of these were photographed in color by Walter Sibley, of Westfield, Arcadia's honorary official photographer, for use in the Society's educational program. Also photographed were the outstanding craft articles made by the last session of Day Camp, which included block printing on linen, coping saw carvings, and mobiles of fish. Advantage was also taken of the extraordinary mushroom crop to make a fine series of color slides of the wide variety of species found.

The Martin project engaged in by Dr. and Mrs. B. Martin Shaub resulted in a good deal of experience and some success. For the first time, so far as is known, a Purple Martin was hatched and raised to fly away by foster Tree Swallow parents. Also, the new martin house was visited off and on from June 13 to June 20 by a pair of Martins, probably one-year-olds. This was a hopeful sign for next year.

Arcadia has a millet patch between Cedar and Horseshoe Trails. This little open-field area has been purposely retained to make a piece of the most desirable type of habitat for the sparrow tribe. Plowed and harrowed in spring, it was later seeded with golden and brown-top millets. Already there is a drift of birds from the ripening millets and weeds to the demonstration hedge, and to the cedars and other cover plants. Perhaps that rare bird everybody keeps looking for will show up here with the regulars this fall!

Arcadia and the Allen Bird Club of Springfield both lost a valued friend and tireless worker when Ernest Yates passed on in August. Ernest Yates had that wonderful ability to hold groups together and to get them to work together for worth-while causes. His counsels will be missed, but the results of his labors will live on.

As a service to our membership, Arcadia has in stock a supply of *Birds of the Connecticut Valley in Massachusetts*, by Aaron Clark Bagg and Samuel Atkins Eliot, Jr. These brand-new volumes are being offered at the new low price of \$3.00. The small profit realized from their sale will go to the land fund.

EDWIN A. MASON

COOK'S CANYON. The hummingbird planting, which last August existed only on paper, is now a vivid, colorful reality. Because of the cold, excessively wet spring, plant growth lagged this season. Even in July borders had the appearance of May; plants were spindling and unimpressive. Then almost overnight the hummingbird area flourished. *Salvia*, *Nicotiana*, and *Cleome* bloom luxuriously, in colors as vivid as the splashes on a palette. Scarlet

runner beans and Heavenly Blue Morning-glories climbing the cedar rail fence provide the background. Not only does the planting attract Ruby-throats and bring them within close range of the observer, but it also creates a splash of color, visible from the street, in what was formerly a drab, weedy area.

Each Hummingbird is fascinating to watch from the office window. After the tiny creature has sipped nectar from several blossoms, he rests on the branches of a near-by white birch. Red-eyed Vireos feasting on viburnum berries just beneath the office window can also be observed closely.

Wildwooders enjoyed another busy, profitable summer at camp. In each of the three sessions approximately forty-five eager youngsters were enrolled. Our facilities seemed to meet the demands of the added enrollment; no one went home without an extra box of assorted equipment produced in crafts or carpentry. The spirit that prevails in a natural history camp is worth witnessing. Camps in general offer the advantage of physical recreation, but Wildwood has something truly rare, for here are youngsters who choose to find recreation through learning.

In the Audubon school classes, as well as in the resident and day camps, emphasis is placed on the fullest use of all the senses. That natural science has a far-reaching appeal to the senses is proved by a lad of whom we are very proud, a boy without sight, who has attended Wildwood for two seasons. In a program where most boys and girls depend on sight, he can find enough to stimulate him in the sound of the birds and the feeling of a multitude of objects.

The fascination of exploring a bog in Ashburnham and the added adventure of climbing Mount Monadnock sparked the program and broadened the experience of the campers, who annually enjoy Quabbin, Wachusett, the Harvard Forest, and the Babbitts. Their eager eyes, both afield and on the Sanctuary, observed ninety-four species of birds.

As if to frustrate the cleaning, reorganizing program that always fills the last weeks of August, Hurricane Carol touched Barre on the last day of the month, scattering limbs, toppling an arbor, and uprooting bushes. We are happy to report no serious damage. The barometer here reached its lowest during a short sunny intermission at about two o'clock in the afternoon, between two phases of the storm. After the lull, the wind shifted from NE to SW and slowly diminished in intensity. Before the winds had calmed very much, a Blue Jay was nonchalantly feeding near our window, at the pear tree feeder.

P.S. Plan to include Cook's Canyon in your fall foliage itinerary.

DAVID R. MINER

IPSWICH RIVER. A review of the summer at the Sanctuary seems so unimportant after the havoc caused by the hurricane. I have just returned from a survey of the damage here. The whole thing is a nightmare and leaves one bewildered and depressed. Of course it could have been worse. But I join others at the "Wailing Wall." For surely the clearing up of noble and magnificent trees will be like attending the funeral of a devoted friend. Averill's Island woods of ancient trees and dark, quiet remoteness has been left a shambles. Although many of the splendid white and red pines and beech were spared, many more were uprooted, torn, twisted, or snapped off. Several large areas are a tangled mess of blowdowns.

One grows fond of certain trees. Along your walks you halt to admire them as old friends, even to a pat on their bark. To find a favorite beech with a six-foot girth completely uprooted is just too much. Nature is slow in healing her wounds, and it will be many years before the scars are hidden.

Our trails were just about in the shape we have been working toward. The interesting, creative work that we have looked forward to must be put aside. The hard and uninteresting work of clearing away the litter will take many months. Willing hands are urgently needed. If any members and their friends can lend a hand with this project it will be most appreciated.

Several specimen trees about the Arboretum are gone, the Osage oranges that everyone admired, beautiful pin oaks, and cucumber magnolias. The tulip trees lean over the trails.

The director's house escaped the fury of the wind, but its windows were heavily filmed with sea salt — although some ten miles from the coast.

About October 1 the remodeling of the barn will be completed. And the conservation museum and meeting room will add greatly to the Society's educational work at the Sanctuary. Why not plan a visit one of these fall days? Bring a picnic lunch and enjoy the out-of-doors.

ELMER FOYE

MARBLEHEAD NECK. The newest of the Audubon sanctuaries is gradually taking shape. Only a short distance from Devereux Beach, it provides many hours of relaxation, not only for the birds, but also for the general public. One meets whole family groups strolling along the trails, some looking for birds, others enjoying nature in general.

Early in the spring, before the snow had left the ground, several new trails were opened up. Having a natural lush growth of berry-bearing shrubs, the only major planting needed was a multiflora rose hedge along the west boundary. A caretaker has been on duty two days each week and is improving conditions in general. Many trail markers were made and put in place by one of the committee members, but, sad to relate, these have all been destroyed.

The first major project was the erection of a stone wall and sign at the main entrance of the Sanctuary. Iron posts with heavy chains between them were set at both ends of Bonad Road, thus closing the Sanctuary to automobiles. A large hot-topped parking area has also been completed at the main entrance gate.

Late in the summer the public school children were escorted through the Sanctuary by the Audubon nature teachers. This instilled much interest in the study of nature, and later several children equipped with binoculars and books were met along the trails.

Records of birds in this area have been kept since 1946, long before it was made a sanctuary. Approximately 128 species of birds have been reported in the Sanctuary so far this year, including Chats, Carolina Wren, and Yellow-throated, Worm-eating, Hooded, Mourning, and Blue-winged Warblers. Many birds have also found it a good nesting site, and already a few fall migrants have stopped by for food and rest en route to their winter quarters.

At this time the Marblehead Neck Sanctuary Committee would like to thank all the public-spirited people of Marblehead Neck who have helped to make this Sanctuary a reality.

DAISY SEARLE

MOOSE HILL. The exodus of August, 1954, was indelibly impressed upon the memories of New Englanders by the destructiveness of Hurricane Carol. Like the debacle of 1938, it will long serve as a focal point in the history of the region — a date about which events happened before or after.

Although the Sharon area sustained no loss of human lives, the impact on many buildings and on trees and shrubs in countless numbers was most devastating. Many trees that were not uprooted had their tops blown out or otherwise hopelessly ravaged. In the opinion of our veteran Trailmaster Fred Cushing, the tree damage on the Sanctuary attributable to Carol was less extensive than the blow of '38. We are, of course, happy to have been spared a worse fate, but it is difficult to take much solace from the large number of fallen pines, oaks, and birches that lie in shambles throughout the Sanctuary. Significantly enough, some of the trees that resisted the onslaught of '38 succumbed in the present encounter and came to rest with their trunks lying across the decayed hulks of those remaining from the previous battle. Quite early in the visitation of Hurricane Carol, there catapulted across the Sanctuary driveway the broad butternut that for over three decades provided support for the Society's Moose Hill Sanctuary "shingle." The taller spruce in front of the residence was twisted off at the base during the height of the storm, when the entire hill was a maelstrom of whirling leaves and branches.

The tale of recovery and restoration is hardly one to be recounted here, but for over a full week now the clean-up job has been progressing, and at the end of each day's sawing and chopping it was heat from an oil stove that gave us hot meals and the mellow glow of candlelight that guided us to bed. Although the task of clearing the tangled trails will extend through many weeks, the assignment is being greatly facilitated by the loan of a power saw from the Cook's Canyon Sanctuary. Anyone interested in combining his bird-watching with a little firsthand experience in swinging an axe or shuttling a saw is earnestly requested to make an early appearance at the Sanctuary office. This opportunity is extended with equal cordiality to both members and non-members of the Society.

Much might be said concerning the summer activities at Moose Hill. It was a busy time and place, and many groups and individuals utilized the Sanctuary's facilities. But the burden of the efforts and resources revolved about the successful operation of the Natural History Day Camp. The world of nature was made more delightful and significant in the lives of well over a hundred boys and girls who were enrolled in one or another of the three two-week sessions that were offered. To meet the needs of the unprecedented number of campers, the teaching staff was augmented to include, besides Director Bussewitz, Trailmaster Fred Cushing, Frances Sherburne, Harry Levi and Emmett Cleveland. A very creditable piece of work was that done by the corps of counselors recruited from the ranks of veteran Moose Hill campers. Perhaps the success of the camp program is best indicated by the ready response of their eyes and ears to the life along the trails and by their departing avowals of "See you next summer." The camp records show that most of the Moose Hill campers are true to their word.

ALBERT W. BUSSEWITZ

PLEASANT VALLEY. Summer is by far the busiest season at Pleasant Valley and thousands of visitors pour through the gates during the months of July and August. Though many know exactly what they are about to see, a much greater number have no idea what a sanctuary is or whether the wild-

life is really wild or in cages. It calls for some tact on the part of the staff to explain things to these people, and the success of the season just drawing to a close has been entirely due to the team-work displayed by staff members, which included two young old-timers, Olivia Cloyes and Melville Thomason; Bill Perry, an ornithology major from Cornell in charge of Day Camp; and last, but by no means least, our volunteer worker Bill Noble, one of the up-and-coming field birders of the Berkshire region. Everyone on the staff had a hand in nearly every part of the summer's work, from Day Camp and guided field trips to group talks and Trailside Museum exhibits, and even to general maintenance, which includes everything from sweeping floors to bridge making.

The Explorers Club, a session of the Day Camp for older boys who have attended Day Camp and demonstrated their keen interest in natural science and their proficiency as campers, got under way before we had time to catch our breath from the campout. The three junior members of the staff were attending the workshop at Barre, and that left Bill and me with our hands full. We enjoyed every minute of it. The Explorers covered the county from Savoy to Bash-bish Falls. Overnights were held on Greylock and at Plantain Pond, where search was made for the first nesting record of the Turkey Vulture. Though this "first" was denied them, the explorers found a number of other nests, including those of the Louisiana Water-Thrush and the Pileated Woodpecker.

The regular Day Camp sessions were equally successful under Bill Perry's vigorous leadership. Parents and campers were enthusiastic and desirous of signing up for next year without delay. A new innovation for Parents' Night, which is held at the close of each two-week session, was a series of short nature talks by some of the campers.

The number of camp groups to visit the Sanctuary was a little larger than in the past and limited only by our ability to handle them. These groups were taken out for a one- to two-hour field trip. After lunch and a rest period they were given a talk on reptile life, and then they visited the Trailside Museum. These trips are viewed by many camps as an important part of their nature program.

The focal point of interest for most of our visitors is the Trailside Museum. Here they can learn about many things to be seen on the Sanctuary and in the county. Two exhibits of wildlife photography were shown this summer, one by W. J. Schoonmaker, of the New York State Museum, and one by the sanctuary director. This year we had a very complete collection of Berkshire reptile and amphibian life, as well as numerous aquariums of fish and aquatic insects. Terrestrial insect life and plant life were also featured exhibits. A new exhibit entitled "Ye Old Woodland Curiosity Shop" attracted a great deal of interest. In this exhibit the visitor viewed various natural objects and then, by raising a wooden flap, learned its name and its relationship to other members of the three kingdoms. Hummingbirds at the feeders on the south end of the museum vied with the bees in the observation hive at the north end for the attention of guests and fought with each other for control of the honey pots.

A series of Sunday morning and Wednesday afternoon field trips was inaugurated this July, and was so well and enthusiastically attended that we feel encouraged to expand our activities in this direction.

ALVAH W. SANBORN

SAMPSON'S ISLAND. The Sampson's Island Sanctuary Advisory Committee met at the invitation of Chairman Richard Pigeon on his yacht at Cotuit, August 17, from 11:30 A.M. to 4:30 P.M. In addition, there were present Mrs. Donald Higgins, Daniel Johnson, Alva Morrison, C. Russell Mason, and the following guests: Mrs. Pigeon, Mrs. Johnson, Mrs. Mason, Laurence B. Fletcher, and Nathan Bates. All were entertained at lunch on board and taken for a tour of the harbor, Sampson's Island, and the adjoining barrier beach areas, Dead Neck and Popponessett.

Two signs were erected on Sampson's Island to replace some that had disappeared. Of six signs placed in the late spring, only two remained. Swimming off the island revealed a fine collection of shells cast up by the tides, which Mr. Bates suggested might be used in the Audubon school program. Weather was co-operative with cloudless skies and the air just a bit cooler than the invigorating waters.

Mr. Johnson reported a fair number of Common and Least Terns nesting this year, chiefly, however, at the Dead Neck end. One thousand was the estimated number. The nesting terns had dispersed, but a few remained and held their tendency to dive-bomb human intruders.

Plans were discussed for following up correspondence with Senator Stone and others relative to the possible acquiring of Dead Neck and Popponessett Island to round out the Sanctuary area for the region and thus make possible a management program for the tern colonies there. Mr. Morrison brought up the question of rat control on Popponessett.

Hurricane Carol caused enormous destruction on our beaches. Most of the boats in the harbor came ashore, many reduced to kindling. Shore birds and land birds disappeared completely for a day or two, then returned in large numbers. The dunes and sandy banks at Sampson's Island are flattened and eroded, giving us a much wider beach. Gulls are feasting on quahogs tossed on the beaches.

MARY R. HIGGINS

Book Reviews

THE TRUANTS. By J. C. Badcock. Illustrations by Margaret Wetherbee. Pantheon Books, Inc., New York. 1953. 124 pages. \$2.75.

This is an interesting little book, the story of an English lad who was a nature lover by instinct and a poacher by necessity. It is graphically written, and the brief descriptions of wild life and country conditions in Leicestershire are couched in picturesque language which gives the volume a distinct flavor of its own. It immediately called to my mind Richard Jefferies and his early book *The Amateur Poacher*, but I cannot agree with the critic quoted on the dust wrapper, that Mr. Badcock "has an eye like Jefferies, and . . . writes better." But here is a small sample of his style:

"The jinties (Greenfinches) were yittering, nervously twittering, whispering urgently, lifting and flying, to fall again twenty yards farther on, mist-feared to fly away, fearful to stay."

There is no discussion of the ethics of poaching, but one cannot help contrasting these Old World sketches with conditions in America, where all game belongs to "the people" and the purchase of a hunting license seems to permit its holder to disregard trespass signs and all private property rights when in pursuit of "legal" game. Poaching, smuggling, rum-running, all are alike in that they involve the breaking of unpopular laws and restrictions.

JOHN B. MAY

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*The Mating Instinct	4.50	The Mammal Guide	4.95
Lorus J. and Margery J. Milne		Ralph S. Palmer	
*Name That Animal	6.50	Mammals of North America, north of Mexico. Illustrated by the author, with 250 figures in full color of 182 species, and 145 maps.	
Ernest C. Driver			

RARE BOOKS THAT HAVE BEEN OUT OF PRINT FOR MANY YEARS (No Discount)

A History of North American Land Birds	\$15.00	Birds of Prey (Part I)	\$15.00
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BOOK REVIEWS (cont.)

WAYS OF MAMMALS IN FACT AND FANCY. By Clifford B. Moore. Ronald Press, New York. 1953. 273 pages. \$3.50.

The Raccoon always washes its food. A whale spouts water. Do elephants go to a community graveyard to die? Frequently such statements and questions are heard, and one wonders where the facts may be found. One wonders, too, where such legends as that of the ground hog and his shadow originated, and whether they might contain some grain of truth. To satisfy one's curiosity, one need only read Clifford Moore's *Ways of Mammals*.

During his years in museum work, the author has had ample opportunity to collect myths, superstitions, and misconceptions concerning nearly every kind of mammal. In his discussion of these, he presents the facts and, frequently, the probable reasons behind the origin of the folk tale. In addition to his own observations, he includes pertinent excerpts from the writings of Ernest Thompson Seton, Frank A. Beach, Enos A. Mills, John E. Hill, and others. Particularly fascinating is a chapter by Glover M. Allen entitled "Bats — and Magic," in which one is given a brief but hair-raising account of ancient uses, medicinal and otherwise, of the unfortunate bat.

Throughout the book one is conscious of two main themes concerning mammalian myths. The first of these is that of hasty and inaccurate observation. Thus the story of the bear sucking its paw for nourishment during dormancy doubtless stemmed from the observer who stumbled upon one and, after beating a hasty retreat, remembered only that the paws were around the bear's nose and jumped to conclusions. The second theme is that of attributing to animals reason and reaction on the human level. Some mammals are extraordinarily observant and therefore appear to have exceptional brains, such as Lady Wonder, the talking horse, while actually they are responding to almost imperceptible motions of the owner or trainer.

The book is divided into eight parts, some of the subjects being Hoofed Mammals, Flesh-eating Mammals, and Gnawing Mammals. Thus it is easy to use as a reference book when questions arise. It should by no means be classified exclusively as such, however, for it is well written and provides a delightful evening of reading for the animal lover and naturalist. In this one volume may be found the answers to many of the questions children in particular are wont to ask, the answers to which are difficult to find in a whole shelf of natural history books.

ELLEN BENNETT

THOSE OF THE FOREST. By Wallace Byron Grange. Illustrated by Olaus J. Murie. Flambeau Publishing Company, Babcock, Wisconsin. 1953. 314 pages. \$4.75.

Snowshoe, the Rabbit, has his home in a corner of a forest; he is touched by the lives of a multitude of other creatures and by a sequence of seasonal events which he does not understand. The author tries to explain this "web of life" to us, though presumably not to the Rabbit (Mr. Grange is continually worried because "Snowshoe does not know."). This is the fault, if there is one, in this fine rehearsal of a year of forest life, interwoven in so many varied and unexpected ways.

All the creatures that are not asleep in January have each their own way of weathering the storms and blizzards. Later come the seasons of awakening and multiplying for all the animals, birds, plants, and insects which share Snowshoe's bit of woods. None can live out the pattern of their days without changing the conditions of life for many others. "The reddish, spongy wood" of a rotted log becomes an ease for Snowshoe's tick bites. An owl takes a Green-winged Teal, drops part of the body into a pond which the Beavers have made, and wild rice from the Teal's crop finds lodgment and grows. Each one has changed the forest.

But pain seems a little ahead of the joy of living, and death comes too often. When one eats, another dies. We know that, yet we like to think of summer in the woods in terms of the rich abundance of life rather than in the cries of the eaten and of those stricken by drought and heat. Whenever an author describes nature from the viewpoint of the animals, the handling of death becomes a problem.

The account moves on through the diminishing scene of autumn. Each animal and plant prepares itself for winter with pleasurable variety. We leave the continuous drama where we came in, having enjoyed with the author a bit of forest with unique completeness.

CORA WELLMAN

SOLD FOR A FARTHING. By Clare Kipps. Photographs by Kenneth Gamm. Frederick Muller Limited, London. 1935. 72 pages. \$1.25.

After a long day's duty as air raid warden in a London suburb, Mrs. Kipps comes home to find a sparrow foundling on her doorstep, apparently dead. She nurses it back to life, and that is the start of a friendship which lasts until the bird dies of old age more than twelve years later. I say friendship advisedly. Mrs. Kipps is a widow living alone and has the time and inclination to offer the bird more



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BOOK REVIEWS (cont.)

than mere food and protection. The relationship is one of mutual affection and respect. Although given the opportunity to make friends with his wild kin, the bird turns instead to his mistress. He makes a nest in her bed, plays at tug of war, and with her does tricks to amuse the London children between air raids. He even develops a most remarkable unsparrowlike song perched on Mrs. Kipps' shoulder as she plays the piano. The small details and habits of his life as well as his accomplishments are told with simplicity and grace.

Walter de la Mare encouraged Mrs. Kipps to write the story of her sparrow, and Julian Huxley has contributed a foreword. Still one wonders what ornithologists may learn of bird behavior from so completely artificial a situation, unless, as is implied by the inclusion of a quotation from C. S. Lewis's *The Problem of Pain*, man has been given dominion over the beasts and "The 'tame' animal is therefore, in the deepest sense, the only natural one."

ELIZABETH K. DARLINGTON

A FIELD GUIDE TO THE ROCKS AND MINERALS. By Frederick H. Pough. Houghton Mifflin Co., Boston. 1953. 333 pages, 12 color plates, 32 halftone plates. \$3.75.

A field guide is supposedly a means for the beginner to make identifications of natural history objects in the field. The previous Guide Books of the Peterson series, which deal with organic nature, have been highly successful in meeting this requirement. The present one, Number 7, *A Field Guide to the Rocks and Minerals*, is an attempt at applying the same general guide format and system of identification to inanimate subjects.

Birds, flowers, and animals have characteristic sizes, colors, and markings as a basis for identification. In the field the subject can be identified by such characters without taking possession of it.

Minerals and rocks do not possess such characteristics, for the size of some minerals varies from microscopic proportions to nearly one hundred tons; the colors are usually variable and may range from red to blue and even colorless; with very few exceptions, minerals and rocks have no characteristic markings. On the other hand, they have extremely characteristic crystals, yet the chapter on crystal classification is dismissed with eight pages. Crystallography is a difficult study, and the amateur cannot use it successfully in identifying minerals with such a brief introduction. Moreover, good crystals are much too rare to be more than occasionally useful to the amateur collector.

As in the other guides, the use of color illustrations is a principal feature, but there is a great difference between the color illustrations of Pough's rocks and minerals guide and Peterson's bird guides. In the latter the birds are the outstanding color feature, while in the former the backgrounds are usually the principal color attraction and the color of the mineral is secondary. In addition, the color of the mineral is often very greatly altered by color diffusion from the unnecessary backgrounds. In the black and white illustrations, the contrast is so severe that only a relatively few pictures have diagnostic value. In both the color and black and white illustrations the photographer has made very poor use of the picture space, as there are illustrations in which as little as one sixtieth of the space is used for the particular mineral illustrated.

The descriptions of the individual species are well presented and are, in general, accurate. However, the use of heavy barite "mud" in drilling oil and gas wells is not to "buoy up the drilling tools," as the author states, but, instead, it is used to prevent the walls of deep wells from caving in and to keep the high gas and oil pressure under control when unexpectedly encountered.

Part One consists of six chapters which give a brief description of the physical and chemical properties of minerals, with the emphasis on blowpipe tests for the determination of minerals. While such tests are valuable in the identification of minerals, the technique is almost entirely a laboratory procedure.

The reviewer agrees, in part, with the author when he says, page 71, "It must be confessed that most mineral identification is done by sight, experience, reading, the examination of the collections of others, and one or two definite tests . . ." However, before making such tests one must be a reasonably good mineralogist and not an amateur.

The editor's plea, page v, not to "leave this book at home on your library shelf, but take it with you on your trips . . ." will, if followed, be a greater hindrance than a help to the collector, in the opinion of the reviewer, who has found that mineral books have a negligible or even detrimental value in the field. His suggestion is that when in the field devote *all* of your time to collecting minerals, good minerals, and especially those you do not recognize. Take them home, and there at your leisure identify your specimens and carefully label those worth saving. *Then* your Field Guide will be of the most use to you.

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BOOK REVIEWS (cont.)

ALASKA'S FISH AND WILDLIFE. U. S. Department of the Interior, Fish and Wildlife Circular Number 17, 1953. Government Printing Office, Washington, D.C. 25 cents.

This leaflet concerns game animals within the area of jurisdiction of the Fish and Wildlife Refuges in Alaska. It should perhaps be better titled "Alaska's Game Animals" because non-game species of fish, mammals, and birds are so summarily treated that they would be as well omitted. In fact, game birds even get a very superficial treatment.

With an amended title, this is a very readable and informative, let alone interesting, account of Alaska's game. It is interesting to see how many of the game species are in the rich forests of "Southeastern" and only large deer, fur bearers, and breeding waterfowl extend as important game species beyond the arc of the Alaska Range. Sportfishing, too, is certainly very local north and west of the Range. The Fish and Wildlife Service has collected a great deal of valuable and delightful information about animals with which we are not familiar.

The illustrations are excellent and need no discussion, unless it is a minor complaint that a Snowy Owl is shown chasing a White-tailed Ptarmigan (a bird of the mountains much farther south) in the section on the Arctic Shelf, the Red and the Blue Foxes are mislabeled.

But as a leaflet which does seem to suggest that it discusses Alaska's fish, mammals, and birds this is disappointing. It is also misleading to someone who might expect to find comprehensive treatment of the Alaskan species. The difficulty seems to arise from undertaking too large a subject and doing it from "Southeastern" or from "Outside." If these limitations were faced and it so stated, it would be a splendid publication. The brief extrapolations into areas of which the Service knows little are as misleading as they are too generalized. For instance, the discussion of the forests of the Interior gives no impression of the real habitats; of the great extent of black spruce muskeg and the restriction of white spruce and birch to well-drained sites. It does not show the variation in tree line from sea level at Bethel to 2300 feet near Fairbanks passing not to the south but northeastward. Another example, in three summers in and out of Alaska's mountains from the Yukon to the Kuskokwim delta and the Alaska Range, I never saw a Water Ouzel — "a common sight along the mountain streams." All the interesting variation in Meadow Mice and one of the most fascinating problems of speciation and

zoogeography imaginable — that of the species of *Microtus* of eastern Siberia, the Bering Sea islands, and Alaska — are discarded as, "Meadow mice: several species belonging to the genus *Microtus*."

The Fish and Wildlife Service is in an ambiguous position on its policies of ecology. They are caught in a compromise between the conclusions of their own field research and political pressures. Also they don't seem to have kept up with recent work (since 1930) on predator-prey relations and just how much control of population a predator can have. For example, the short paragraph on the decline of Reindeer in western Alaska. The decline of herds coincided with the taking over of the herds by the Native Service from private owners (which is not stated). The local people lost interest or were excluded from herding. The result has been neglect of the Reindeer, and, from this primary cause, straying, depletion of range, and predation are secondary developments. Neglect was, however, listed as the third cause of the decline after depletion of range and depredation by wolves. Despite the recent work on predator-prey relations in Europe (even using some North American data) and Murie's work on the wolves of Mt. McKinley Park, the Fish and Wildlife Service persists in the view that wolves are a serious destructive agent, offers a bounty, and boasts of a special elimination program. It is an odd coincidence that stories trappers told me personally of killing twenty-nine Moose for winter food supply in one place and seventeen Dall Mountain Sheep on one mountain in one fall in another place occurred at exactly the time wolves suddenly started serious depredations after centuries of living in Alaska without eliminating the game.

It is too bad that the booklet skips so lightly over any discussion of the tremendous forests of Southeastern as a feature in itself and a habitat for wildlife. It also brushes over the tide of waterfowl migration through the island waterways in spring and fall and the teeming flocks of alcids, gulls, and shore birds of the Inside Passage and the Bering Sea. It includes a list of species at the end which has taken the constructive step of eliminating subspecies, whatever their basis for this choice, but animals are listed alphabetically under classes and largely without comment.

The material on game fish and mammals deserves only praise. This pamphlet is an excellent progress report of the Fish and Wildlife Service work in southeastern Alaska which indicates what a wide-open field for research exists in Alaska beyond the mountains.

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FRED J. PIERCE has been editor of Iowa Bird Life for 24 years, and is head of the Pierce Book Company which deals in Natural History books. He is author of hundreds of articles on birds, and editor of Althea Sherman's Book "Birds of an Iowa Dooryard." He has been a student of birds for 37 years, and his contributions to the field have been honored by his election (one of 200 in America) to "Member" of the American Ornithologists' Union.

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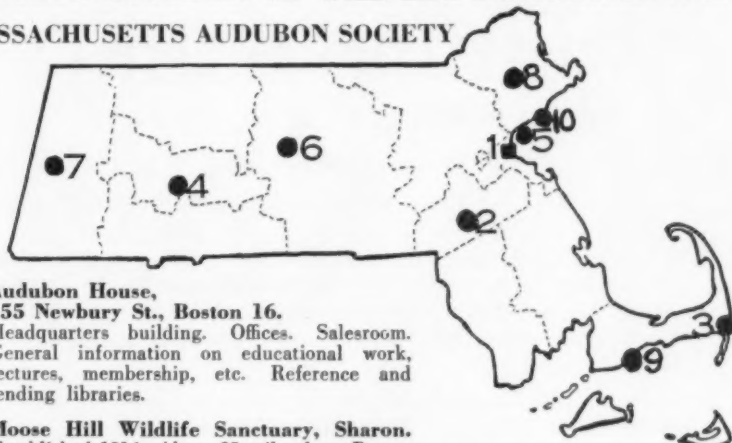
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